Vermont Department of Public Service
Biennial Report

July 1, 2000 - June 30, 2004

May 9, 2005

Department of Public Service
112 State Street - Drawer 20
Montpelier, Vermont 05602-2601
(802) 828-2811
TTY/TDD (VT): 1-800-734-8390
e-mail: vtdps@psd.state.vt.us
Internet: http://www.state.vt.us/psd

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Consumer Affairs & Public Information Division (CAPI)	http://www.state.vt.us/psd/ci.htm
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Vermont Telecommunications Plan	http://www.state.vt.us/psd/tel00.htm
Vermont - Most Favorable Wind Resource Areas	http://www.state.vt.us/psd/ee/wind/windpacket.htm

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Distributed Utility Planning: Concepts and Issues	http://www.state.vt.us/psd/ee/EEUeval/EvalHome.htm

INTRODUCTION

The Department of Public Service (Department or DPS) is charged with representing the public interest in utility cases before the Public Service Board, federal regulatory agencies, and state and federal courts; providing long range planning for the state's energy and telecommunications needs through the *Vermont Electric Plan* and the *Comprehensive Energy Plan*; ensuring all Vermonters share in the benefits of modern communications through the *Vermont Telecommunications Plan;* promoting energy efficiency; administering federal energy programs; resolving utility customer complaints; and making and administering contracts for the purchase of power on behalf of the state.

The Department's mission is to serve all citizens of Vermont through public advocacy, planning, programs, and other actions that meet the public's need for least cost, environmentally sound, efficient, reliable, secure, sustainable, and safe energy, telecommunications, and regulated utility systems in the state for the short and long term. The Department does this by

- Promoting the interest of the general public in the provision of the state's regulated public services--electricity, natural gas, telephone, cable television, and to a limited degree water and wastewater;

- Ensuring that the state's telecommunications infrastructure can support a diversified set of services that address the current and potential needs of the state's residents and business entities; and

- Protecting the public health and safety and ensuring that safety regulations established by federal and state government for nuclear facilities, natural gas, and certain types of propane installations are met.

Under 30 V.S.A. §24, the Department is required to prepare a Biennial Report for the General Assembly. Biennial Reports have been required since 1855, when the legislature provided for the appointment of a railroad commissioner (No. 26 of the Acts of 1855), giving this commissioner

> ... a limited jurisdiction over the operation of steam railroads with access to the books and accounts of railroad companies operating in Vermont and required such railroads to make annual returns of such character as the commissioner should prescribe. . . . By No. 64 of the Acts of the same session, the commissioner was required to make an annual report to the legislature during the first week of its session. (*Biennial Report of the Public Service Commission of the State of Vermont*, Dec. 1920 - Dec. 1921, 3).

By 1908 the structure of the Commission and its areas of jurisdiction had grown and changed. Under its new name, Public Service Commission, which replaced Board of Railroad Commissioners, the legislature expanded its authority to include jurisdiction over the manufacture and distribution of gas, electricity, telegraph and telephone companies, and sleeping car companies. A few years later, reservoirs and private water companies were added. Since these early years, the Department's organization and responsibilities have continued to evolve. However, since 1855, Biennial Reports to the General Assembly have been prepared, reflecting significant activities and the status of companies under the jurisdiction of the Public Service Commission, which since 1981 has been separated into the Public Service Board and the Department of Public Service.

This Biennial Report describes highlights of the Department's activities over the past two biennia - July 1, 2000 through June 30, 2002 and July 1, 2002 through June 30, 2004.1 Chapter 1 focuses on the Department's services to the citizens of Vermont over the prescribed time period. Chapters 2 through 5 provide information on regulated

1 For ease of reference in this document, we refer to the biennial report period covering July 2000 through June 2002 as the 2000 to 2002 biennium, and the period from July 2002 through June 2004, as the 2002 to 2004 biennium. For reference purposes, the entire period covered by this report is referred to as the 2000-2004 biennia and covers 4 fiscal years (2001, 2002, 2003, and 2004), the period from July 2000 through June of 2004.

industries - electric utilities, telecommunications, natural gas, and water and wastewater. For companies in each of these industries, information is presented that reflects current financial status, services provided to Vermont consumers, and rates.

1. DEPARTMENT OF PUBLIC SERVICE ACTIVITIES

A. Public Advocacy Division

The primary purpose of the Department's Public Advocacy Division is to represent the Department in administrative litigation before the Public Service Board (Board or PSB), covering all areas of the Board's jurisdiction over public service companies or utilities and the conduct of their business. It is also responsible for representing the public interest of Vermont relating to utility matters in all forums where those interests are at stake, including federal regulatory agencies, as well state and federal courts.

Public Advocacy is headed by a director, a statutory appointee who is responsible to the commissioner, and six full-time staff lawyers. Other areas within DPS provide experts, such as engineers, economists, or analysts, and support services for Public Advocacy. Outside consultants are hired to help with some cases.

The Public Advocate is a statutory party in all cases before the PSB. Most litigation work done by Public Advocacy has historically been in utility rate cases that determine whether and how much a utility's rates should be changed because of capital investment and operating expenses. More recently, the Public Advocacy Division is involved in investigations involving transmission line upgrades, wind generation and issues such as alternative regulatory plans, access to transmission facilities, and contracts for purchase of power by utilities. Public Advocacy is also responsible for review of proposed utility tariff changes, certificates of public good, and special contracts and for making a recommendation to the Public Service Board on whether to investigate or approve those filings. In fiscal years 2003 and 2004 there were respectively 1067 and 951 such filings.

Public Advocacy participates in cases before the Board that pertain to the award of a license or certificate of public good (CPG) that is a prerequisite for companies beginning operations in Vermont or for gas and electric utilities to construct new facilities. The Public Advocate is also required to participate in PSB proceedings on a public service company's request for Board approval to issue stock or take on financing or debt obligations. Public Advocacy represents Vermont citizens and consumers and presents evidence at Board hearings about how the public interest will be affected by actions for which utilities request Board approval. (30 V.S.A. §248 covers new gas and electric purchases, investments, facilities and CPG requirements.) In addition to these traditional activities, Public Advocacy has worked closely with and provided support to the Consumer Affairs Division on consumer protection issues arising from consumer complaints. In accordance with 30 V.S.A.§202(f), DPS makes determinations about the consistency of utility proposed actions (issuing stocks, bonds or other financings, or purchases) with the *Vermont Electric Plan*. Public Advocacy also works on cases to enforce public service laws, Public Service Board Orders, and for resolution of significant consumer disputes.

Tables 1-1 and 1-2 show the numbers and types of cases that the Public Advocacy Division has worked on in the past two fiscal years. The number of hours required to complete a case can vary greatly, but this represents the normal workload carried by this Division.

In addition to its work before the PSB, Public Advocacy represents the public interest in a wide variety of cases before federal district and appellate courts, the Vermont Supreme Court, and occasionally Vermont Superior Court. The Public Advocacy Division also represents the public interest of Vermont in matters before the Federal Communications Commission (FCC), the Federal Energy Regulatory Commission (FERC), the Securities and Exchange Commission (SEC), and the Nuclear Regulatory Commission (NRC). These administrative agencies have exclusive authority over crucial utility matters such as interstate telephone, interstate transmission of gas, wholesale power sales, and nuclear power plant licensing. Representing the public interest of Vermont before these agencies has required the Public Advocacy Division to appear in federal circuit courts in Boston, New York, New Orleans, and Washington D.C. Cases before these courts and agencies are only a small fraction of the Division's total caseload, but they carry major significance.

Table 1-1

Public Advocacy Case Activity by Industry - FY 2001-FY2004
(Non-docket Filings)

	FY-2001	FY-2002	FY-2003	FY-2004
Electric	75	335	116	69
Telephone	469	376	510	493
Cable TV	122	194	440	375
Gas	21	17	18	12
Water	2	5	2	1
Total	689	927	1,086	950

Public Advocacy FY2004 Dockets Processed

	Pending	New	Total
Electric	80	51	131
Telephone	35	55	90
Cable TV	4	5	9
Gas	2	6	8
Water	5	9	14
Total	126	126	252

A substantial part of the legal staff's time involves legal planning, advising, and drafting. This work is performed in anticipation of foreseeable litigation, so that staff lawyers are prepared to react quickly if such a case were to come up. Litigation can often be avoided by timely negotiation. With the assistance of DPS personnel from other divisions, Public Advocacy frequently reviews proposed construction and tariff filings and meets with utility petitioners to discuss possible settlement of disputed issues.

The Public Advocate and other DPS personnel also work to initiate change that is recognized to be in the public interest. An example of this type of activity is the ongoing scrutiny of utility revenue requirements to determine if rates can be reduced. Public Advocacy and DPS technical personnel are working with utilities on economic development contracts for employers who are moving to Vermont and creating jobs. The goal of these contracts is to create new jobs without causing a burden to other customer classes.

Table 1-2
Open Cases Indicating Typical Workload for Public Advocacy Division

	1997	1998	1999	2000	2001	2002	2003	2004
PSB Dockets (Total)	208	290	319	277	216	276	272	252
Electric	83	102	103	93	59	119	140	131
Natural Gas	7	6	3	7	7	7	9	8
Cable TV	21	21	29	14	13	14	15	9
Telephone	66	127	156	148	125	124	97	90
Water	31	34	28	15	12	12	11	14
Vermont Supreme Court	3	4	6	8	3	3	2	1
Vermont Superior Court	1	1	0	1	1	1	0	0
Vermont Agencies, FERC, NRC, SEC, FCC, U.S. Courts	32	31	39	22	15	17	29	31

Source: Vt. DPS Public Advocacy Division and Vt. Public Service Board

The Public Advocate provides in-house legal assistance to DPS. As does any state agency, DPS requires almost daily legal advice on major and minor matters. Lawyers respond to public record requests, they interpret statutes, review and draft bills during the legislative session, and they interpret and explain to DPS personnel the essential steps to follow in federal regulatory requirements.

B. Consumer Affairs and Public Information Division

The Department's Consumer Affairs & Public Information Division (CAPI) facilitates informal resolutions of citizens' complaints against regulated utilities, advocates for policies which protect consumer interests, and educates consumers about utility issues so they can more effectively advocate for themselves. CAPI handled the following number of consumer contacts from 2000-2003:

Table 1-3

Consumer Contacts From 2000- 2003	
2000	5,247 total contacts
2001	5,514 total contacts
2002	5,318 total contacts
2003	6,026 total contacts

Consumer contacts are classified as either "complaints" or "queries." Complaints involve some expression of consumer dissatisfaction with something about their utility service. Queries are consumer questions in which no dissatisfaction is implied or expressed. Complaints are further broken down into "grievances" and "escalations. An escalation is a case in which, following investigation, CAPI determined that there was something the utility could or should have done differently to resolve the consumer's concern before the individual contacted DPS. Consumer contacts over the four-year period are shown in Table 1-4.

Table 1-4

Complaint Classification Table

	2000		2001		2002		2003	
	#	%	#	%	#	%	#	%
Grievances	2,434	46.4%	2,000	36.3%	1,999	37.6%	2,196	36.4%
Escalations	1,277	24.3%	1,433	26.0%	1,079	20.3%	1,034	17.2%
Total Complaints	3,711	70.7%	3,433	62.3%	3,078	57.9%	3,230	53.6%
Queries	1,536	29.3%	2,081	37.7%	2,240	42.1%	2,796	46.4%
Total Contacts	5,247	100.0%	5,514	100.0%	5,318	100.0%	6,029	100.0%

Table 1-5 displays the number of complaints by utility type which, following investigation, were found to be justified. The majority of these complaints concerned utility deposits, service disconnections, service installations, billing problems, quality of service, and repairs. The trend toward reduced complaints concerning electric service has been offset by an increase in the complexity of telephone complaints and the number and complexity of cable complaints. The telephone category, which in the past consisted primarily of complaints about local telephone, now includes long distance, wireless, payphones and billing aggregators. Complaints about long distance service now predominate.

Table 1-5

Utility Customer Escalations* to DPS, 1999-2003

Type	1999	2000	2001	2002	2003
Telephone	907	882	889	748	734
Electric	454	265	240	149	200
Cable TV	142	105	286	163	78
Natural Gas	17	21	23	15	19
Water	0	3	1	4	3
Other	2	2	1	0	0
Totals	**1,522**	**1,278**	**1,440**	**1,079**	**1,034**

Source: DPS Consumer Affairs & Public Information Division
*An escalation is a case in which, following investigation, CAPI staff determines there is something the company could or should have done differently before the consumer contacted DPS. An escalation may or may not involve a violation of rule or law.

The Division successfully resolved 96.2 percent of complaints in 2000 and 96.6 percent in 2001. (A resolution is considered successful if the consumer receives all or a portion of the relief he or she is seeking.) The remainder of complaints were either referred to the PSB or no satisfactory resolution was achieved. Actions taken by the Consumer Affairs & Public Information Division saved individual consumers $123,007 in 2000, $208,959 in 2001, $124,952 in 2002 and $160,167 in 2003.

Table 1-6 shows the number of times utilities subject to the Public Service Board's disconnection rules disconnected residential consumers for delinquent payment. Telephone, gas and electric companies are subject to stringent consumer protection rules for disconnecting residential customers because these are considered essential services and, for the most part, are currently provided on a monopoly basis, although limited competition for local telephone is now available for service to the home. Disconnection rates reflect both customer characteristics and the flexibility shown by companies in working with customers to obtain payment, while still keeping the lights, phone and heat on. Various state-level and utility-specific programs have shown that both goals can be effectively served through a combination of payment plans that take customer circumstances into account, along with full utilization of available third-party support, both public and private. Assistance to low income customers facing disconnection to negotiate payment plans or otherwise obtain the protections available under the Board rules is a significant component of the work performed by CAPI staff.

Table 1-6

Utility Service Disconnections, 2000-2003

Type	Number of Residential Disconnections	Disconnections per 1000 Residential Customers	Type	Number of Residential Disconnections	Disconnections per 1000 Residential Customers
	2000			**2001**	
Telephone	6,292*	63.8	**Telephone**	16,976	57.3
Electric	6,054	21.6	**Electric**	8,029	28.8
Gas	663	63.8	**Gas**	851	28.8
	2002			**2003**	
Telephone	14,377	50.0	**Telephone**	18,923	67.5
Electric	8,650	28.6	**Electric**	9,973	32.2
Gas	1,067	35.6	**Gas**	1,338	43.5

Notes: Disconnection statistics are not available for cable TV, water, and wastewater. Source: Monthly utility disconnection reports to DPS. *Verizon disconnected customers during only two months of 2000 because of changes in its credit and collection systems that were underway during the first ten months of 2000. Because of this anomaly, Verizon's stomer numbers and and disconnection statistics have been omitted from the calculation.

In addition to direct assistance to consumers with utility-related complaints, CAPI also acts as expert staff in cases regarding consumer issues. During the two bienniums, CAPI was instrumental in the establishment of service quality and reliability monitoring plans governing all but three of the state's electric utilities, along with Vermont Gas, Verizon, Adelphia and Charter. The division also supported enforcement actions against a variety of companies, which demonstrated a pattern of consumer protection violations, such as slamming. Division staff also served as expert witnesses, on the consumer protection issues involved in the Adelphia franchise renewal case, and several rate cases. At the regional level, CAPI helped to initiate a coordinate a multi-state effort to reduce slamming which has led to a related national initiative, and to facilitate the creation of a national model rule that should improve the process consumers experience when changing carriers. The division also provided training to a wide range of utilities and consumer advocates to reduce the incidence of consumer complaints by improving utility practices and the ability of advocates to work with utilities on consumers' behalf.

C. Planning Division

Preparation of Statewide Plans.

Planning Division is responsible for directing the review of the state's uses and projected needs for several types of service that are considered essential to the "public good", specifically the state's electric and telecommunications industries. For electricity and telecommunications services, the Department's Planning Division gathers data on past usage and assesses current market conditions, emerging technologies, key indicators of the state's anticipated economic and demographic conditions. In its preparation of these plans, the Planning Division uses several advanced computer simulation models. For economic forecasts, the REMI model is used, and a system dynamic model of the energy sector are used to forecast total energy use. These plans also set out goals and objectives reflecting prior plans, Board Orders, and Vermont Statutes, a survey of the current situation, and a set of statewide policies, guidelines, and recommendations to guide future decision making.

During the biennial period covered in this report considerable research efforts have been undertaken in preparation and publication of drafts of the Electric Plan, Comprehensive Energy Plan and publication and adoption of the Telecommunications Plan. Adoption of the Electric Plan was completed early in the 2004-2006 biennium (January 19, 2005).

Electric Plan Revision

Pursuant to 30 V.S.A. §202 the Department of Public Service is required to prepare a Plan which lays out long-range goals, specific objectives and recommended actions for meeting Vermont's electricity needs. The most recent version of the *Vermont Electric Plan* was adopted January 19, 2005 replacing the December 28, 1994 Plan.

The Plan analyzes the current status of the state's electric utility industry and the primary factors that may influence it over the planning horizon, discussing background and definition of the major issues. This Plan is state government's public policy document for Vermont's electric utility industry. In addition any company seeking board authority to make investments, to finance, to site or construct a generation or transmission facility or to purchase electricity or rights to future electricity, must request a determination by the department whether the proposed action is consistent with the plan.

The overriding goals of this Plan are to meet Vermont's electric energy needs in a manner that is efficient, adequate, reliable, secure, sustainable, affordable, safe, and environmentally sound, accomplished in a manner that is consistent with other state policies.

The Vermont Comprehensive Energy Plan

The *Vermont Comprehensive Energy Plan* (CEP) covers all forms of energy used in Vermont and a plan to modify that energy use to improve environmental quality, affordability, and renewability, 30 V.S.A. §202b requires a periodic update of the state energy plan. The last Plan was adopted in 1998 and the next Plan will be completed in the 2004-2006 Biennium.

Preparing for Vermont's energy needs is closely related to efforts to control Vermont's greenhouse gas emissions, which come primarily from energy use. This close relationship was recognized by the incorporating the development of a state climate change action plan as part of the *CEP.*

Fueling Vermont's Future: Comprehensive Energy Plan and Greenhouse Gas Action Plan published July 1998 expanded the scope of the Energy plan to include presentation of policies and 149 recommendations that can reduce greenhouse gas emissions from energy related and non-energy related source categories.

Some actions resulting directly from the plans recommendations during the 2000-2002 biennium:

March 2000, Vermont became the first state in the nation to have most electric energy efficiency programs administered by a statewide entity funded through an energy efficiency charge (EEC) on ratepayer bills. Efficiency Vermont (EVT), the contractor serving as the state's energy efficiency utility (EEU), delivers a set of seven statewide core energy efficiency programs to all customers in the state. Efficiency Vermont is a not-for-profit, private corporation serving under contract to the PSB.

October 2002 a Memorandum of Understanding, Docket 6290 In re: Investigation into Establishment of DUP Guidelines - DPS and the state's utilities should work together on protocols as well as demonstrations of techniques and technologies that represent least cost approaches to the concept of a distributed utility.

Vermont Telecommunications Plan

Vermont law (30 V.S.A. § 202d) requires the Department to periodically revise the *State Telecommunications Plan*. This *Plan* provides policies and actions that promote investment in broadband and mobile telecommunications services throughout Vermont. The *Plan* also provides guidance on many other topics, including how to preserve high quality, affordable telephone service, improve public safety communications, and make better use of telecommunications technology in government and small business.

In addition the *Plan* provides guidance to state regulators dealing with telecommunications issues before the Public Service Board, and it provides a framework for community and economic development officials, state government telecommunications managers, and legislators about how to meet state telecommunications goals. The *Plan* also communicates state priorities and objectives to providers of telephone, data, and cable communications services.

The new *Telecommunications Plan* replaces a prior edition that was adopted in 2000. Building on drafts of a state telecommunications plan released by the Department in March and June of 2004, the Department issued the *Vermont Telecommunications Plan, v. 4.0.* September of 2004.

The Planning Division revised earlier drafts after considering comments received in writing and at four public hearings in April and two in July. The September release is the final adopted *Plan.*

The final *Plan* is posted on the web at www.state.vt.us/psd/telecomplan and www.thinkvermont.com/telecomplan and will is available at regional planning commissions, regional libraries, and by request at the Department.

Review of Gas and Electric Purchases, Investments, Sales, and Facilities Proposals

The Planning Division also carried out statutory requirements related to analysis and review of any utility proposal to purchase natural gas, electric capacity, or energy from outside the state (if the contract amount was greater than 1% of the utility's load and the contract period exceeds five years) in accordance with 30 V.S.A.§248. This statute also requires prior approval of any site preparations or investments in natural gas and electric facilities or transmission lines. The Department's assessment of these utility proposals, along with input from other designated parties and the public, is taken into consideration as the Board determines whether the proposed action will promote the general good of the state. If the Board approves the proposed contract or investment, a certificate of public good (CPG) is issued, allowing the proposal to proceed.

Utilities notify the Department when seeking PSB authority to make investments, issue debt, construct a generation or transmission facility, or make certain purchases of electricity so that the Department can determine whether the proposed action is consistent with the *Vermont Electric Plan* (30 V.S.A.§202(f)). During the period of this report, Planning completed 16 reviews of this type during the 2000-2002 period and 38 determinations during the 2002-2004 biennium.

Special Contracts.

Planning coordinates with the Economics Division in the review of special contracts. 30 V.S.A. §229 establishes that no electric, gas, or telephone company may enter a contract or render any special service that is not covered in a current PSB approved rate schedule, without prior approval of the PSB. (See Section 1.F. for more information on special contracts.)

Review of Utility Integrated Resource Plans.

The state's electric and gas utilities prepare Integrated resource plans (IRPs), in accordance with the *Vermont Electric Plan*, Board Orders, and 30 V.S.A. §218c, these IRP's are reviewed by the Planning, Engineering and Energy Efficiency Divisions. Least cost integrated planning for energy utilities was made a statutory requirement in 1992 (30 V.S.A.§218b and c). Each of Vermont's regulated electric utilities and the state's natural gas utility must submit for DPS review and PSB approval an integrated resource plan (IRP) that documents the utility's long-term planning and analysis. A key component of each IRP is the utility's planned portfolio of supply resources, demand side management (DSM), and transmission and distribution improvements that will enable the company to serve its customers at the lowest societal cost over the next 20 years.

Litigation Support, Special Studies, and Other Activities

The Planning Division also provides litigation support, technical support and expert testimony for a wide variety of other Department activities such as cost studies, calculation of avoided cost rates, economic and policy analyses for major rate cases, forecasts, cases at the FERC and courts, the unpriced external costs of energy services, special studies, and surveys. Information and technical support on issues related to DPS responsibilities are also provided to other state agencies, such as the Agency of Natural Resources, the Economic Progress Council, Department of Finance and Management, Department of Taxes, Environmental Board and the Vermont Legislature. Internally the Planning Division lends technical and analytical support to CAPI, other divisions, and collaborates with the Engineering Division in development and implementation of the Vermont Yankee Emergency Response Plan.

The Department's Planning division provides technical support, expert witness testimony for most special studies and investigations initiated by the Vermont General Assembly and/or by Board or Department initiative relating to matters of ratepayer concern or affecting Vermont's regulated utilities.

D. Energy Efficiency Division

Introduction

The Energy Efficiency Division (EED) works to develop policies and programs that increase energy efficiency and the use of renewable energy in Vermont. The EED initiates, promotes, coordinates, monitors, evaluates and reviews a wide variety of policies, programs and initiatives. In some instances it takes a lead role in implementing them. The EED's main web page is found at:
http://www.state.vt.us/psd/Menu/Energy_Efficiency_and_Renewable_Energy.htm .

In all its work the EED is guided by Vermont's Energy Policy, articulated in 30 V.S.A.§202a:

> *It is the general policy of the state of Vermont:*
>
> *(1) To assure, to the greatest extent practicable, that Vermont can meet its energy service needs in a manner that is adequate, reliable, secure and sustainable; that assures affordability and encourages the state's economic vitality, the efficient use of energy resources and cost effective demand side management; and that is environmentally sound.*
>
> *(2) To identify and evaluate on an ongoing basis, resources that will meet Vermont's energy service needs in accordance with the principles of least cost integrated planning; including efficiency, conservation and load management alternatives, wise use of renewable resources and environmentally sound energy supply.*

The EED's primary responsibilities can be summarized as follows:

- The EED, in cooperation with the Public Service Board (PSB) and the Contract Administrator, employed by the PSB has primary responsibility for overseeing the operation of Efficiency Vermont (EVT, which is Vermont's Energy Efficiency Utility or EEU).[2] The EED reviews the activities of EVT, advises and participates in program design changes, assesses EVT's performance, verifies its savings claims and manages an extensive program of formal evaluation and reporting on EVT's performance, and ongoing assessment of Vermont's energy efficiency markets.

- The EED helps design and set the Energy Efficiency Charge (EEC) to fund the EEU.

- The EED participates with the Planning, Engineering and Legal divisions of the DPS in overseeing the implementation of least cost distribution planning or Distributed Utility Planning (DUP) by Vermont electric and gas utilities.

[2]The Department provides the same functions with regard to Burlington Electric Department's implementation of core energy efficiency services within its own service territory.

- The EED works with the U.S. Department of Energy (DOE) and with the Environmental Protection Agency (EPA) on grant writing, management and implementation. The EED functions within the Department as Vermont's State Energy Program (SEP which is funded by DOE). The Department supports the School Energy Management Program with SEP funds.

- The EED administers and manages Vermont's Petroleum Violation Escrow (PVE or "oil overcharge" funds.) By 2004, all PVE funds were fully obligated.

- A staff person within the EED reviews energy usage and efficiency features of Act 250 permit applications under Criteria 9 (F) and (J).

- The EED proposes, updates and implements energy efficiency building codes in both the residential and commercial sectors.

- The EED monitors fossil fuel supply and price activity, and makes proposals for improved supply and efficiency, including proposals related to transportation energy efficiency, demand side alternatives to motor vehicle travel, and alternative-fueled vehicles.

- The EED has worked closely with EVermont, the state's alternative fueled vehicle program, to produce a national-level resource for cold-climate operation of electric and hybrid vehicles.

- In 2001 and 2002, the Department hosted a Transportation Planner who worked on transportation policy, demand-side transportation strategies, and the design and installation of roundabouts.

- The EED helps prepare, update, and, if necessary, helps implement Vermont's Energy Emergency Plan.

- The EED coordinates with other state agencies to reduce the cost and environmental impact of the State's own energy use.

- Increasingly, over the last four years the EED has taken a leading role in developing programs and policies to promote the development of renewable energy technologies, including wind, solar, biomass, farm methane and biodiesel. The Department has also helped with the promotion of Combined Heat and Power (CHP) applications, including industrial applications and District Energy systems.

- The EED works closely with the Department of Agriculture to implement a program to develop effective strategies for promoting methane use on farms. It works closely with Forests Parks and Recreation (FPR), hosting a staff person from FPR in the Department part-time to coordinate efforts on biomass energy issues.

- The EED assisted with the creation of the Vermont Solar and Small Wind Incentive Program, which has awarded approximately $960,000 in incentives toward installation of small-scale renewable energy systems.

Within the Department, the EED works with the Planning Division on the *Vermont Electric Plan and* the *Vermont Comprehensive Energy Plan*. The EED's new role as the entity responsible for evaluation of energy efficiency markets and programs provides improved input and information to the Planning Division for these plans. The EED also works with other Department divisions to review the Integrated Resource Plans by Vermont energy utilities. It also works with the Economics and Public Advocacy Divisions on matters related to rate cases and other litigated proceedings.

The EED works with Vermont utilities, other state and federal agencies, businesses, institutions, non-profits and advocacy groups. The EED also serves as an advocate for energy efficiency and renewable energy in local, state, regional and national forums.

Creation and Implementation of the Energy Efficiency Utility

In May of 1997, the Department of Public Service (DPS) proposed the creation of a single independent statewide Energy Efficiency Utility (EEU) to deliver the energy efficiency programs being provided by the State's electric utilities. In January of 1999 the DPS, Vermont electric utilities, and other stakeholders entered into a lengthy and complex negotiation process to create the EEU.

Legislation clarifying the Board's authority to create an Energy Efficiency Utility and fund it through a separate charge on customer utility bills was passed in the spring of 1999. On September 30, 1999, the Board issued an order in Docket 5980 that approved a settlement between the DPS, the electric utilities, and stakeholder groups and created the EEU. Shortly thereafter, the Board issued RFP's to select an EEU, a "Contract Administrator" to oversee the EEU contract, and a "Fiscal Agent" to collect and disburse the funds. By January of 2000, Vermont Energy Investment Corporation (VEIC) was selected as the winning bidder. VEIC commenced operation of the EEU with the name "Efficiency Vermont" on March 1, 2000.[3]

Efficiency Vermont (EVT) has now been in operation for almost five years. For its initial three-year contract, it met or exceeded all of its major performance requirements. It is currently operating under a three-year contract extension that provides statewide energy efficiency services through calendar year 2005. EVT is nationally recognized as an innovative and effective structure for delivering energy efficiency programs.

Table 1-7

Statewide Energy Efficiency Programs Projections
For Three Year Period 2003 – 2005

	Three Year Budget 2003 - 2005	**Projected Annualized MWh Savings**
Efficiency Vermont (EVT)	$ 43,698,200	119,490
Burlington Electric Department (BED)	$ 2,554,617	7,487
Total	$ 47,143,874	126,977

A table showing EVT's and BED's annual expenditures and electric savings accomplishments for 2001 through 2003 can be found in section 2G of this report.

Early in the second quarter of calendar year 2005, the Public Service Board will issue an RFP for an entity to serve as the EEU starting in 2006.

[3] Efficiency Vermont provides efficiency services statewide, except Burlington. The Burlington Electric Department delivers the statewide core programs in its service territory.

Energy Efficiency Utility Oversight and Evaluation

The Public Service Board holds the contract with the energy efficiency utility and thus has direct oversight responsibilities for its operations. Pursuant to 30 V.S.A. § 209(e)(10), the Board must provide for an independent evaluation of the programs delivered by the EEU. By Board order, the DPS is charged with this responsibility and is provided funding through the energy efficiency charge ("EEC"). DPS activities undertaken in fulfillment of this responsibility are performed by the Energy Efficiency Division and include annual verification of EVT's annual savings and total resource benefit claims, ongoing review of its savings assumptions documentation, and formal assessments of the residential and business energy efficiency markets and EVT program effects on those markets. The DPS evaluation budget funded by the EEC for 2000 – 2002 totaled $1,125,000 or 3.7% of the total EEU budget. These expenditures were made primarily to fund professional market assessment and evaluation studies. The evaluation budget for the current 3-year contract extension (2003 – 2005) totals $1,574,900 or 3.3% of the total EEU budget.

A report on the DPS evaluation activities for the 2000 – 2002 EEU contract cycle was completed in August 2003. The complete report, including the results of the formal residential and business energy efficiency market assessments, can be found at[4] *Efficiency Evaluation web site*.

Other EEU evaluation activities conducted by the EED during 2003 include the verification of EVT's 2002 claimed savings and total resource benefits, ongoing review of EVT's documentation of savings estimates, verification of certain additional contract performance indicators applicable to the conclusion of EVT's first 3-year contract, and development of an evaluation plan for the current EVT contract period. At the end of 2004, implementation of that plan is well underway. Professional energy efficiency evaluation consultants are now under contract to provide a review and evaluation of the EEU programs and services for the past two years that will be particularly useful to the PSB in developing the EEU RFP that will be issued in 2005 and in subsequent contract negotiations for energy efficiency services in the next 3 to 6 years.

Independent Audit of Energy Efficiency Utility Energy and Capacity Savings

Under 30 V.S.A. §209(e)(12), the Public Service Board ("PSB") must also "require verification, on or before January 1, 2003, and every three years thereafter, by an independent auditor of the reported energy and capacity savings and cost-effectiveness of programs delivered by" the EEU. On December 26, 2002, the Board issued an "Independent Audit of Vermont Energy Efficiency Utility Energy and Capacity Savings for 2000 and 2001" dated December 20, 2002 as required by the legislation. This report verified the EEU's annual energy and capacity savings estimates, as modified in the DPS verification process, and found the programs to be highly cost effective. The data from Table 1 of that report is reproduced in Table 1-8 of this Biennial. The PSB must provide an audit of the EEU's savings and cost effectiveness for verified Program Results 2002 through 2004 on or before January 1, 2006.

4 http://www.state.vt.us/psd/Menu/EE_and_Renewable/EEU_Eval_Home.htm

Table 1-8

Cumulative 2 000-2001 EVT Verified Program Results

		Commercial Industrial Sector	Residential Sector	Total Program
Electric Energy Savings (Net at Generation)				
A	Annualized MWh	29,745	29,943	56,688
B	Lifetime MWh	469,168	392,092	861,259
Capacity Savings (Demand Reduction)				
C	Winter Peak kW	6,403	5,274	11,677
D	Summer kW	3,256	2,925	6,181
Utility Cost Test				
E	Cost per kWh Saved	$0.023	$0.031	$0.027
Societal Cost Benefit Test				
F	Net Societal Benefit per kWh Saved	$0.041	$0.033	$0.037
G	Benefit Cost Ratio	2.14	1.75	1.93

Source:Independent Audit of Vermont Energy Efficiency Utility Energy and Capacity Savings for 2000 and 2001. December 20, 2002

Funding Vermont's Energy Efficiency Utility: the Energy Efficiency Charge

In the spring of 1999, the Vermont legislature authorized the Public Service Board (PSB) to establish an energy efficiency charge ("EEC") to fund EEU programs. The law provides that effective June 1, 1999, the charge be shown separately on each electric or gas customers bill and that it not exceed the amount needed to provide $17.5 million of energy efficiency programs annually. The Energy Efficiency Division was substantially involved in developing the methodology and calculating the charges for 2001 through 2004.

EEC Amount

For the years 2000 through 2002, the rate design for the Energy Efficiency Charge was a pre-determined percent of each customer's electric service charge for each billing month of the calendar year. The charge varied by utility. Starting in 2003, the charge is applied directly to the customer's monthly energy and demand use. For most Vermont electric ratepayers, the charge is uniform in the same customer class, regardless of which utility provides electric service to that customer.[5]

The PSB authorized EEU budget amounts to be collected by the EEC for the period 2001 through 2005 are shown in the following table:

5 Burlington Electric Department (BED) did not collect an EEC in 2001 or 2002. It funded the implementation of the core programs in its service territory through bond proceeds. BED started collecting an EEC in 2003. The design of the BED EEC is the same, but the actual charge is calculated separately and is slightly different than the statewide charge. WEC customers pay a slightly different EEC amount, per Board approved agreements, through 2005. Starting in 2006, its customers will pay the statewide EEC as the rest of Vermont's electric customers.

Table 1-9

Total Annual EEU Budget to be Collected through the Energy Efficiency Charge ("EEC")	
2001	$ 10,240,568
2002	$ 12,478,531
2003	$ 14,000,000
2004	$ 16,224,477
2005	$ 17,500,000

Fund Collection and Management

The EEC appears on each electric utility customer's monthly bill and is collected by the serving utility. The funds collected are not utility revenue, nor is their disbursement a utility expense. Each utility forwards the EEC collections to a Fiscal Agent under contract with the PSB. The Fiscal Agent disburses all EEC funds collected.

There are a number of documents available with further details about the EEC. Most of these are available on the Public Service Board's website (www.psb.state.vt.us) as specific Board orders under the link "PSB Orders". The site organizes the orders by year and month.

Orders related to the Energy Efficiency Charge are:

November, 2004	Docket 6987, order issued 11/01/2004
November, 2003	Docket 6874, order issued 11/21/2003
December, 2002	Docket 6777, order issued 12/30/2002
October, 2002	Docket 6741, order issued 10/31/2002
November, 2001	Docket 6564, order issued 11/26/2001
December, 2000	Docket 6429, order issued 12/09/2000
November, 1999	Docket 5980, order issued 11/19/1999
September 1999	Docket 5980, order issued 09/30/1999

The Public Service Board has initiated rulemaking to establish the methodology by which the EEC is calculated annually. Once the rulemaking is approved, it will no longer be necessary for the Board to set the annual charge through a formal docket.

Review Of Act 250 Applications For Energy Efficiency

The standard for permit review under Act 250, Vermont's land use statute requires applicants to use the "best available technology" for energy design and equipment. Department staff is part of the interagency team that reviews and comments upon land use proposals under Act 250. The Department is responsible for reviewing applications for conformance with Criteria 9(F) (energy efficiency) and 9(J) (public utility ability to serve).

An Energy Efficiency Specialist at the Department reviews Act 250 proposals weekly and determines whether Act 250 applicants have met the energy criteria. About one-half to one-third of all applications typically are deemed to have a significant energy impact. These may be retail malls, office buildings, schools or other large facilities. The Department contacts individual applicants and discusses ways to make a project more energy efficient, which can produce many benefits, including lower utility bills for a building's occupant and reduced pressure to raise utility rates by decreasing demand.

In recent years, the Department has evaluated the energy designs of 1 million to 1.5 million square feet of new construction proposed in Act 250 applications each year. This represents an estimated $150 million in construction value. The Department's review normally occurs in a prompt, efficient manner and provides information to developers about resources that can improve projects from the perspective of energy consumption. The 2001 Vermont Guidelines for Energy Efficient Commercial Construction have helped to expedite the Department's review of Act 250 permit applications in a simplified, consistent and streamlined manner. The guidelines are modeled on national energy codes and standards, and have provided a predictable "target" for energy performance by applicants.

A new resource became available to Act 250 applicants in the year 2000 - Efficiency Vermont, which can help affirm whether a project complies with the law's minimum energy requirements. Efficiency Vermont also provides technical review of projects with recommendations for improving energy efficiency. It also offers financial incentives for certain measures or design features that exceed minimum energy guidelines prescribed in Act 250 permits.

Residential Building Energy Standards (RBES) Update

The 1997 General Assembly approved Vermont's first energy code, the Residential Building Energy Standard. It is based on the national Model Energy Code and gives home designers and builders a predictable, minimum guideline for energy performance in Vermont's climate. The most significant accomplishments of the Energy Efficiency Division during the last two years in this area were an evaluation of residential building practices and code compliance, and the completion of the work necessary to bring an updated code into the rule-making process. The following sections note the salient points of each effort and include web site addresses for more information.

The statute enabling RBES requires regular code updates. It states that:

> *...the department of public service shall provide technical assistance and expert advice to the commissioner [of the Department of Labor and Industry] in the interpretation of the RBES and in the formulation of specific proposals for amending the RBES. At least a year prior to final adoption of each required revision of the RBES, the Department of Public Service shall convene an advisory committee to include one or more mortgage lenders, builders, building designers, utility representatives and other persons with experience and expertise, such as consumer advocates and energy conservation experts.* (21 V.S.A. §266 (c).

In December of 2000, the advisory committee completed its work and submitted a draft report. Based on this report a sub-committee developed a set of recommended revisions to the 1998 International Energy Conservation Code ("IECC 98"). A sub-committee of technical, governmental, and industry representatives translated the draft recommendations into code language. The primary impacts of the recommended revisions are as follows:

- Incorporates design criteria for residential ventilation systems
- Develops Vermont-specific thermal transmittance requirements
- Includes combustion safety requirements
- Provides for a compliance path via a home energy rating
- Provides an exception from the requirement for individual electric meters for certain facilities.
- Bases the RBES on the latest version of the IECC, IECC 2000.

In the interim, the DPS solicited the input of affected stakeholders and worked to build consensus for the proposal. The advisory committee met in October, 2002 for a final review prior to initiation of rule making. Significant

revisions to the revised RBES include requirements for a simple controlled ventilation system and outside air supply for combustion heating systems.

The DPS and the Department of Labor and Industry began the rule making process to update the RBES early in 2003. The rule making was completed in May 2004 (Department of Labor and Industry Administrative Rule #04-001). Revised marketing, outreach and compliance materials were developed and distributed in support of the revised Residential Building Energy Standards to take effect on January 1, 2005.

Residential New Construction Evaluation Survey

Vermont's housing stock has increased by roughly 2,700 units each year between 1999 and 2001. In a survey of these homes approximately 59% met the RBES requirement for total thermal transmittance (UA), a measure of heating energy use. A comparable study of homes in 1995 found that only 35-40% achieved the same level of energy efficiency. The Vermont achievement is particularly striking in comparison to a similar study in Massachusetts where, unlike Vermont, the law provides for inspection and enforcement. The Massachusetts study in 2000, done 18 months after implementation of their residential building code, found that only 46% of the new homes in Massachusetts complied with the same thermal transmittance standard.

Vermont's new housing stock improved on several other scales as well. Table 1-10 below summarizes the changes. The evaluation highlighted other significant aspects of Vermont's residential new construction market. The number of participants in the market is high as is the proportion of custom homes. There are 560 entities that claim single-family home construction as their primary business producing roughly 2,200 homes a year. In comparison, New Jersey has 1,670 builders producing roughly 30,000 homes per year. In addition to the relatively low production volume, homeowners build about 22% of new homes. Only a small share of the market, 6% of all homes, are completed prior to purchase while 62% of all homes are built to plans developed specifically for the owner (custom homes). By way of contrast, in New Jersey only 16% are custom homes. These factors add up to a housing construction industry that is relatively large, diverse, and difficult to influence.

Table 1-10

Vermont Baseline Construction Characteristics

Compliance Feature	1995 (n ' 151)	2002 (n ' 158)
Percent of homes meeting UA Requirements	35 B 40%	59%
Attic insulation meets or exceeds code requirements	61%	68%
Wall insulation meets or exceeds code requirements	57%	90%
Basement wall insulation meets or exceed code requirements	48%	62%
% glazing area with 2-pane, Low-e glass	70%	80%
Mean Air Infiltration - measured in air changes per hour (ACH)	~.45 ACH	.31 ACH
Mechanical ventilation installed per code	6%	32%
Mean Heating system Oversizing Factor	>100 %	92%
Percent with tankless coil water heating (inefficient method)	32%	3%

Commercial Building Energy Standards (CBES)

The Energy Efficiency Division has been managing the Commercial Building Energy Standards development and implementation project under a number of state energy program grants with the U.S. DOE. This project is closely coordinated with the state's building design, engineering and construction community in an effort to develop consensus-based, statewide minimum efficiency standards for commercial new construction in the state. The Vermont CBES development team utilized the latest generation national model energy codes (IECC 2000/ASHRAE 90.1-1999) in developing the *2001 Vermont Guidelines for Energy Efficient Commercial Construction.* The 2001 Commercial Guidelines were published in October 2001. Training workshops, outreach and technical assistance to support the implementation and adoption of the *2001 Vermont Guidelines* has been the primary focus of the project throughout 2002 and 2003.

The development, adoption and implementation of the *2001 Vermont Guidelines for Energy Efficient Commercial Construction* is a complex, multi-faceted project involving numerous stakeholders from the state's building construction, engineering, architectural and real estate community coupled with various state agencies and many other interested parties. The energy code affects most of the state's new commercial, industrial, institutional and high-rise multi-family building construction projects. The CBES project team successfully developed a number of technical documents, implementation plans, training materials and public outreach and education materials including a website (http://www.state.vt.us/psd/ee/ee19.htm) to make the code documents and compliance guides readily available to Vermont's building design and construction community.

The *2001 Vermont Guidelines for Energy Efficient Commercial Construction* has been adopted by the City of Burlington for all commercial new construction and by the State of Vermont for state funded new commercial construction projects. The 2001 Guidelines have also been successfully integrated into criterion 9F (energy conservation) of Act 250 review to expedite permit approval in a simplified, consistent and predictable manner. The 2001 Guidelines establish minimum energy performance requirements for Act 250 permitted commercial and industrial developments throughout the state. For commercial construction not currently subject to the 2001 Guidelines on a mandatory basis, Efficiency Vermont, (the statewide energy efficiency utility), Vermont Gas and other utilities use the 2001 Guidelines to establish baseline energy efficiency requirements under their commercial new construction efficiency program services on a voluntary basis.

The Efficiency Division also works closely with neighboring states, various regional and national energy code organizations and other professional associations and trade groups to advance the adoption of reasonably consistent, current, building energy codes on a regional and national basis. Vermont's success in developing and implementing the *2001 Vermont Commercial Guidelines for Energy Efficient Commercial Construction* has been closely coordinated with similar, concurrent efforts in New York, Massachusetts and other states in the northeast.

The 2001 Vermont Guidelines for Energy Efficient Commercial Construction and the associated national model codes are subject to regular review and analysis by the CBES development team and project stakeholders. The development team expects to publish the first major update to the 2001 Guidelines in 2005.

Fossil Fuel Use, Price, Availability

The EED and its predecessor, the State Energy Office, have been monitoring fossil fuel supply and prices for over two decades. From the first week of October until the end of March (the Vermont heating season), a weekly survey of fuel dealer prices is conducted. To maintain a reasonable time series of fuel price data, the survey is conducted on a monthly basis during the rest of the year. In addition to price information, the EED collects and publishes information on price protection programs and special purchase programs dealers may offer.

During the summer of 2001 the EED distributed a mail survey to fuel dealers in Vermont. The survey captured a snapshot of the fossil fuel delivery infrastructure, including storage and delivery capacity, annual sales, source of supply, and employment levels. This information was entered into a custom database developed during the summer of 2002.

EED outreach efforts include publication of the monthly *Vermont Fuel Price Report* on the World Wide Web. It serves as a resource on fuel issues for the media, the administration, and the legislature. It maintains a positive relationship with fuel dealers through direct contact and interaction with the Vermont Fuel Dealers Association. EED staff represents the Department on the *Home Energy Assistance Task Force* (HEAT Force), a statutory body intended for policy review of the state's low-income fuel assistance program.

Figures 1.1 through 1.5 compare the average monthly price for 2001 through 2004.

Figure 1- 1

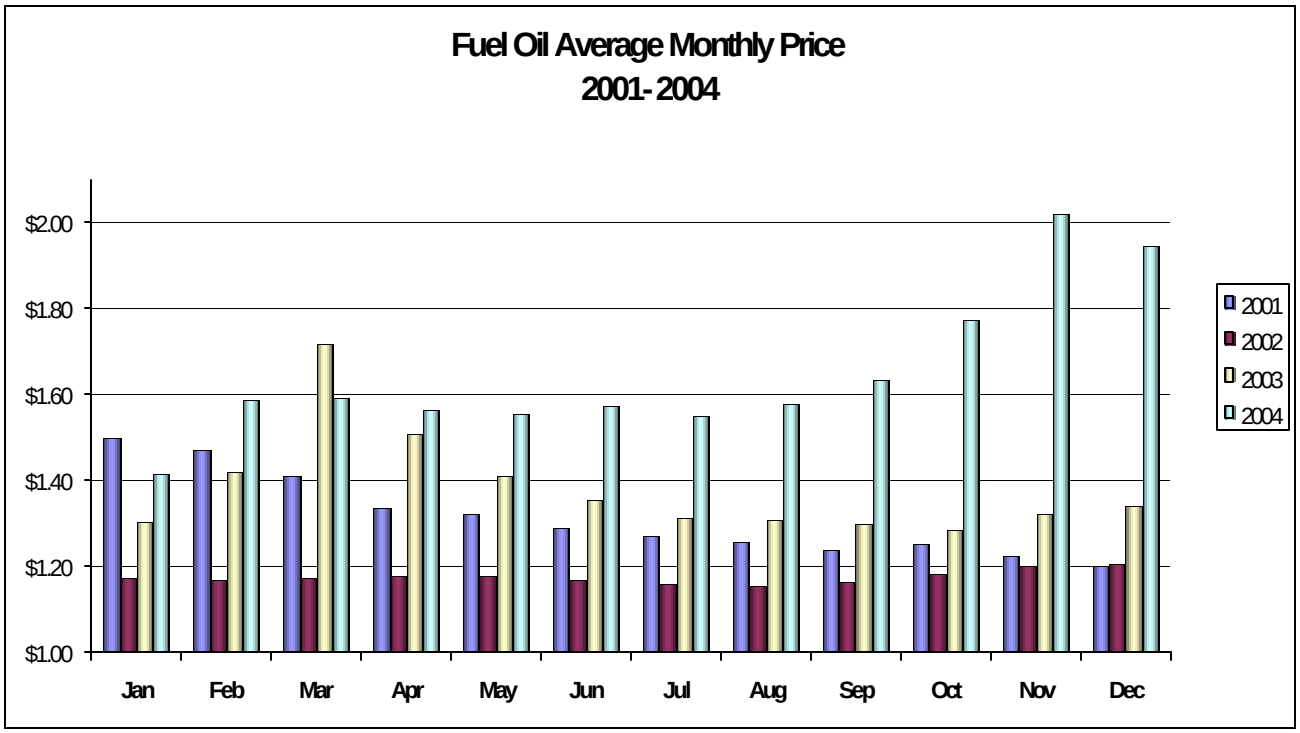


Figure 1- 2

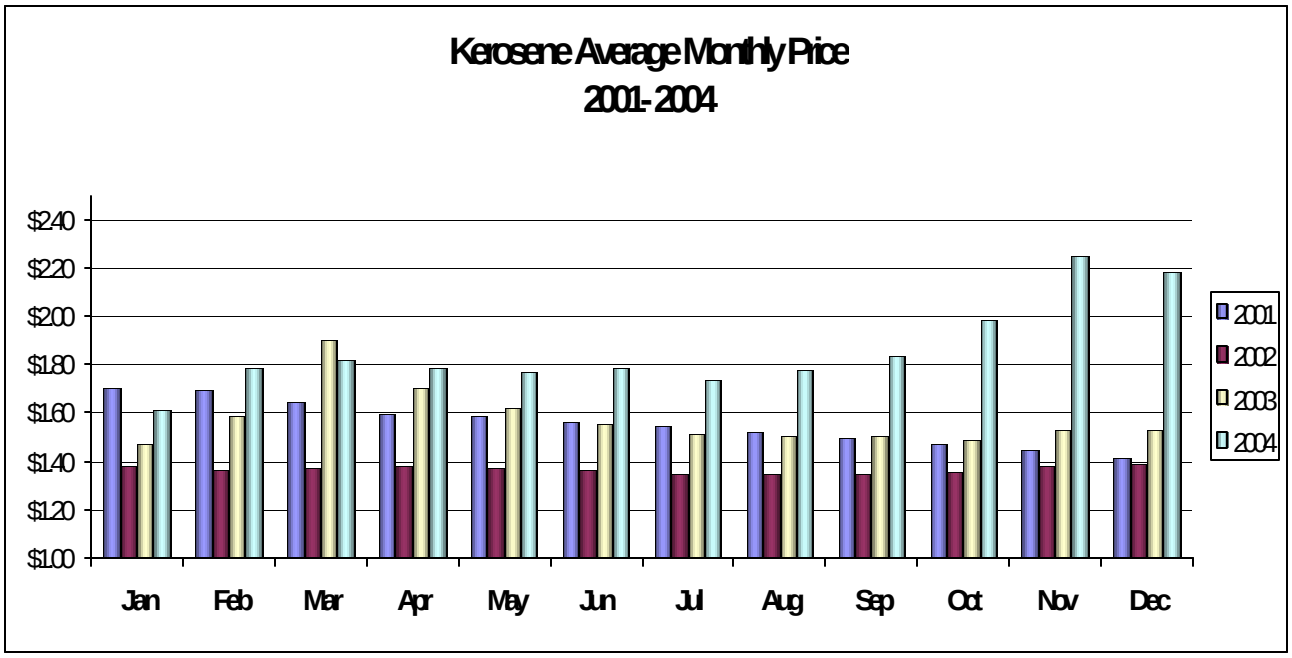


Figure 1- 3

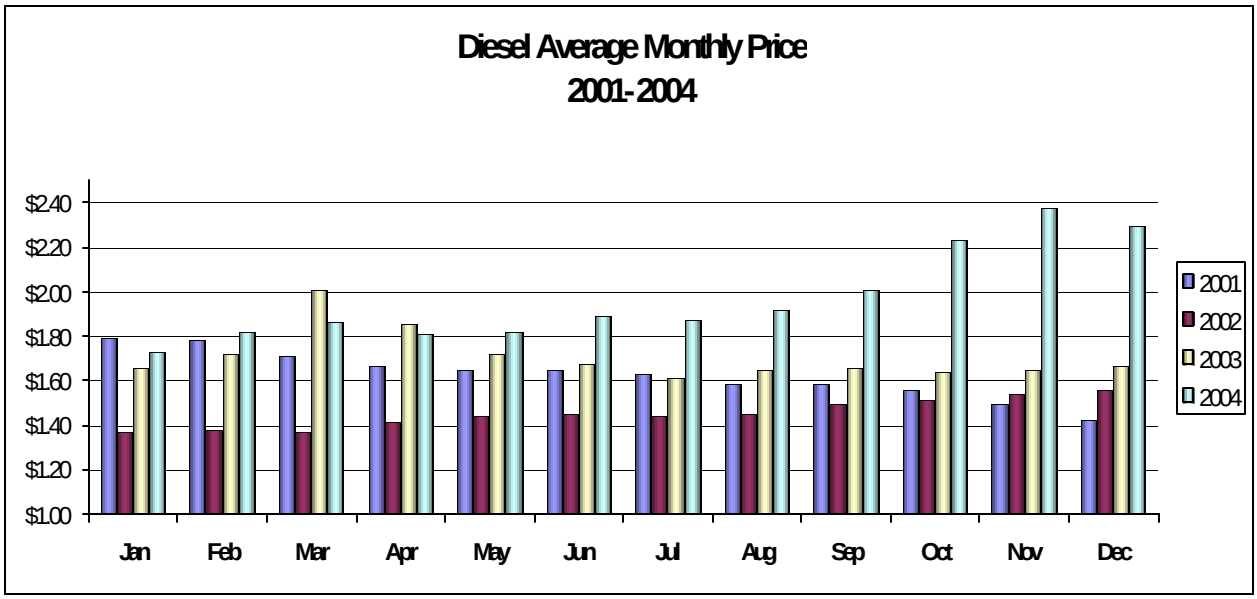


Figure 1-4

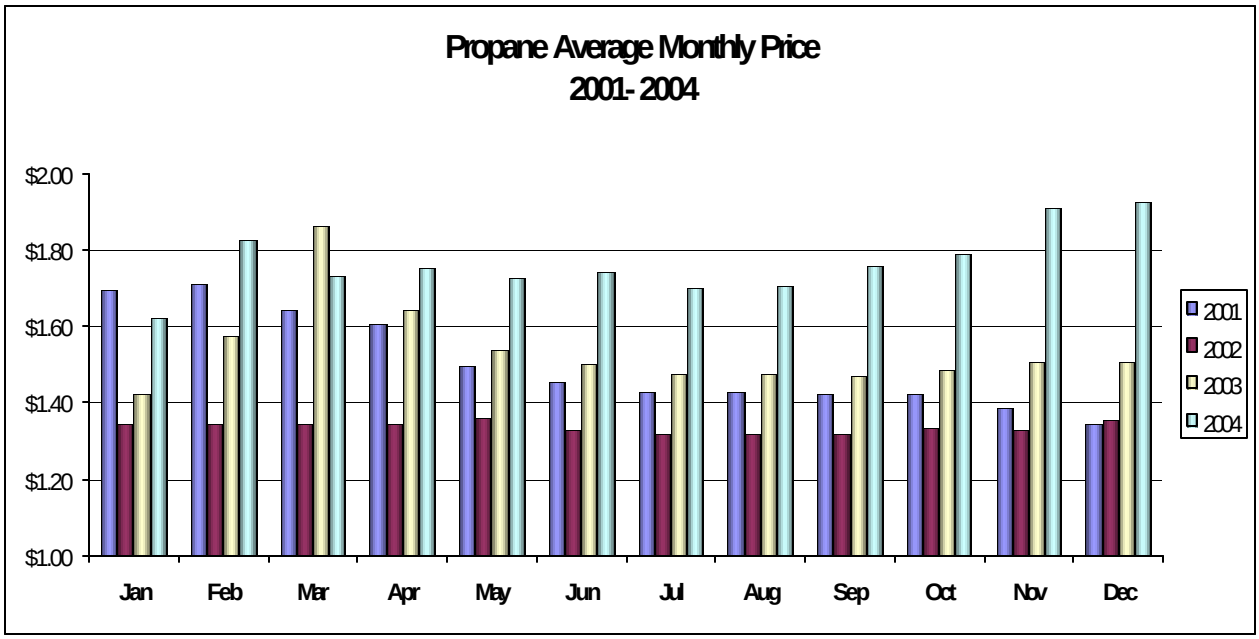
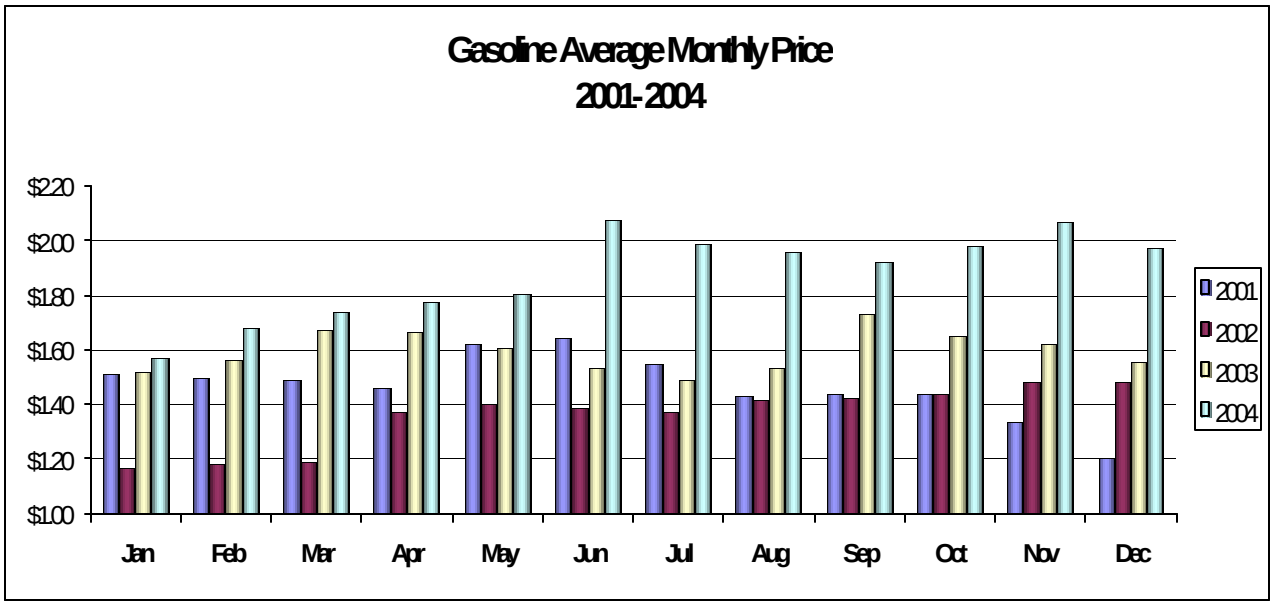


Figure 1- 5



Transportation Planning and Policy Development Program Elements

Realistic efficiency and demand reduction options in energy use in the transportation sector must be pursued as part of a comprehensive Vermont energy policy. In partnership with the Agency of Transportation (AOT), which formerly supported a position in the EED, the DPS began an expanded effort in the summer of 2000 to implement certain *Comprehensive Energy Plan* elements in the transportation sector. This inter-Department effort terminated during 2003.

Here in Vermont three of the four energy sectors (residential, commercial and industrial) total consumption of all types from the mid-1970s to the mid-1990s showed remarkably little change. During this period adoption of conservation and energy efficiency measures helped hold the line on energy use. In the mid-1990s these three sectors again began to grow about one to two percent a year.

The Vermont transportation sector, the fourth energy sector, followed a distinctly different pattern. Road transportation accounts for about 95% of transportation energy use. From mid-1970s to mid-1990s, vehicle travel increased 87%. Energy consumption in the transportation sector increased over 40% and today represents about half the total consumption of all energy in Vermont. Further, the transportation sector now accounts for over 60% of the fossil fuels consumed in Vermont. Recent consumer buying patterns, which have favored larger, SUV type vehicles, have demonstrated a reversal of a tendency towards more fuel-efficient vehicles.

A significant new trend is emerging: Growth in vehicle miles traveled is moderating to 1%-1% annually. This is an historic change in highway travel where any annual growth number under 3% was unusual. The 1990s motor

vehicle travel growth of 17%, was the lowest decade- to-decade increase since tabulation began in 1920. Other New England states show a similar pattern.
EED transportation work has centered on activities related to the growing interest in roundabouts in Vermont and throughout North America. At a typical busy intersection installing a roundabout not only generates significant transportation benefits, but also produces motor fuel savings. Analysis of data from the Brattleboro roundabout indicates a reduction of over 30,000 gallons of motor fuel from reduced idling or "stop delay" due to the conversion of a signaled intersection to a roundabout.[6]

Other areas of emphasis include: 1) commuter choice initiatives designed to reduce solo commuting by car; 2) Contributing to the Burlington effort to reduce GHGs known as the "10 Percent Challenge;" and 3)providing comments, information, and assistance to transportation policy and planning both inside and outside the Department.

Specific accomplishments include:

- Support for the City of Burlington "Alliance for Climate Action" planning and implementation of an expanded countywide effort to reduce greenhouse gas emissions (GHG) 10% below the 1990 level (www.10percentchallenge.com on the web).

- Coordinating and managing two one-day roundabout seminars experts on roundabouts and with Rutland Regional Commission. Each seminar attracted over 100 participants.

- Completing a research paper, *Modern Roundabouts, Global Warming and Emissions Reductions: Status of Research and Opportunities for North America*, which was then presented at the Canadian Transportation Research Forum; and peer-reviewed corridor research demonstrating that roundabouts along a corridor to be superior to traffic signals.

- Monitoring and disseminating to Vermont professionals and community leaders roundabout research, information, seminar materials, and developments.

- Working with the legislative Transportation Committees to put into law in 2002 (H.764) the first US statute recognizing the importance of roundabouts. The language calls on the AOT to employ roundabouts, particularly at intersections with a poor safety record.

- Participating and providing leadership to reduce solo commuting, including: 1) submission of a commuter fringe benefit demonstration grant proposal; 2) working with a Waterbury state employee group that developed a Waterbury Complex commuting survey and plan; 3) exploring ways to implement new federal tax law allowing a pre-tax treatment for employee commuting expenses for van pooling and transit; and 4) contributing to the successful "commuter choice" seminars in 2001 designed to introduce the "Commuter Choice Leadership Initiative" of the EPA. This leadership initiative is a self-starting program for any private or public organization to design its own "commuter choice" plan to reduce solo driving. Vermonters have a long love affair with their automobiles and the personal freedom of traveling alone. It will be impossible to reverse the consumption of fossil fuels in the transportation sector without an aggressive program to promote ride sharing. Expansion of strategically sited Park & Rides, combined with ride sharing opportunities, can help to move public acceptance of this energy saving technique.

- Presentations with various groups and organizations to explain how roundabouts work and how they can contribute to many Vermont priorities including: 1) containing sprawl; 2) allowing

[6] Redington T, "Modern Roundabouts, Global Warming, And Emissions Reductions: Status Of Research And Opportunities For North America." *Proceedings 36th Canadian Transportation Research Forum, p (CTRF, Saskatoon, Sakatchewan).* (2001)

higher density land use development; 3) enhancing down towns and village centers; 4) improving transportation; and 5) improving air quality.

State's Energy Saving Efforts

Staff of the EED have supported efforts by Vermont state agencies, colleges, and universities to promote improved energy efficiency and renewable energy use. In the last four years there has been an increasing emphasis placed by the Department of Buildings and General Services on improving the energy efficiency of existing and new office buildings and other facilities operated by the state. The Springfield Correctional Facility illustrates how energy efficiency has become a priority among state buildings managers. This new 500-bed facility incorporates state-of-the-art energy design and equipment in its thermal shell, lighting and HVAC systems. An on-site heat-and-power plant will provide most of the heat and electricity needed at the prison. EED staff participated in the planning and permitting process for the prison.

EED staff has also consulted with Purchasing Division managers to promote procurement of energy efficient products. An Energy Efficiency Specialist helped one of the state's purchasing agents write bid specifications for high efficiency lighting products and has provided the Purchasing Division with information about the growing trend among purchasing managers to promote "energy efficient procurement." Overall, the Purchasing Division has significantly expanded energy efficient options available to state purchasing agents, particularly as it relates to appliances, air conditioning equipment and lighting products. To improve energy performance and help the environment by reducing our energy use, BGS has established a policy to purchase Energy Star-compliant products, where possible, without compromising quality or performance. These products use 25 to 50 percent less energy than their traditional counterparts.

DPS staff continue to participate in the intradepartmental Climate Neutral Working Group. The short-term goal is to draft a plan to decrease greenhouse gas emissions from state operations by 2012 by 25% from 1990 baseline. The working group arose to fulfill the governor's issuance of Executive Order #14-03, which directed agencies and departments to reduce greenhouse gas emissions from state government buildings and operations.

DPS in 2004 secured a U.S. Department of Energy grant for $126,000 to support efforts by BGS to make state facilities more energy efficient. During the term of this two-year grant, BGS will benchmark energy use at state facilities and create a work plan to cut energy use. DPS has also set up another agreement with BGS wherein a small wind turbine will be erected at the Alburg visitor center. This project will be supported by funds originally made available from a federal appropriation secured by Senator Jeffords.

The Department also helped state buildings managers initiate relations with Efficiency Vermont, the energy efficiency utility. State facilities' managers now routinely call upon the efficiency utility for technical assistance and incentive support when buying equipment or designing facilities. The EED has also purchased an infrared camera for use by BGS, where it will be used for preventive maintenance such as examining the condition of building thermal shells and roofs, as well as electric equipment and circuits.

At the end of 2003, DPS was awarded a SEP Special Project grant from the U.S. DOE for the *Vermont College and University Energy Partnership (VCUEP).* The VCEUP is a two-year project designed to foster the implementation of energy efficiency and renewable energy projects on Vermont's college and university campuses. This project was funded under the DOE Rebuild America Program. Grant activities will be fulfilled by Renewable Energy Vermont (REV) along with their project partners Efficiency Vermont and the Vermont Sustainable Jobs Fund, as well as campus partners: Middlebury College, Vermont Technical College, and Green Mountain College. Grant work will take place at these and other Vermont campuses.

Specific goals of VCUEP are to:

Improve the efficiency of a minimum of 50,000 square feet of space in college and university buildings.

Create and facilitate two statewide workshops per year regarding energy efficiency and renewable energy projects implemented on Vermont College and university campuses.

Encourage Rebuild America partnership formation with participating institutions.

Wind Energy Development

In the U.S. and worldwide, wind generated electricity is the fastest growing segment of renewable energy production. Wind energy generation has continued to increase as it has become more cost competitive due to technological improvements and federal tax credits. As of December 2004 wind developers have indicated their interest to explore constructing at least six commercial-scale projects in locations around the state, which would have a combined output capacity between 60 and 150 MW. Though technological developments and federal subsidies have played a major role in the vigorous development of this resource, the EED has also addressed key barriers to wind power development in the state in recent years. These activities include: the Wind Siting Consensus Building Project; grant management for Senator Jeffords' 2001 wind energy "earmark" appropriation; and collaborative projects with renewable energy organizations.

The Wind Siting Consensus Building Project was made possible by a U.S. DOE grant. The main purpose of the grant was to build consensus among key wind energy stakeholders including developers, environmentalists, government, and others on how utility-scale wind power projects can be appropriately sited in Vermont. Project outcomes included:

- Four half-day workshops attended by 70 wind energy stakeholders covering topics related to land use, aesthetic impacts, and avian and other biological issues.

- Completion of the document "*Wind Energy Planning Resources for Utility-Scale Systems in Vermont*", which consolidates wind energy information in a way that helps town and regional planners plan for wind energy (http://www.state.vt.us/psd/ee/wind/windpacket.htm)

- A series of presentations and workshops to the general public and schools about wind energy and its potential to meet some of Vermont's electric needs.

A congressional appropriation sponsored by Sen. Jeffords in 2001, secured nearly $1.5 million in federal dollars to study the potential for wind energy in Vermont and to advance the development of Vermont's wind resources through small wind demonstration projects at farms, schools, municipalities, and welcome centers. These funds have been used to:

- Refine the 1999 study, *Vermont - Most Favorable Wind Resource Are*as to more precisely represent the strength and quality of Vermont's wind resource. More sophisticated mapping techniques have increased map resolution from 1km blocks to 400-meter blocks. The most recent maps also display the location of transmission lines, roads, and environmentally sensitive areas using GIS overlays (http://www.northeastwind.com/whatwevedone/reports.html).

- Study wind potential at ski areas.

- Develop and install highly visible, 10kW wind turbine projects at seven schools, two farms, and one welcome center in Vermont. These projects are in various stages of development.

- Develop educational resources and promote wind technology programs at Vermont Colleges.

- Support the Vermont Department of Forests, Parks, and Recreation public process to examine their policy regarding wind generation on public lands.

- Support the *Vermont Commission on Wind Energy Regulatory Policy*. (A final report with the Commission's recommendations can be viewed at: http://www.state.vt.us/psd/index/WindCommissionFinalReport-12-15-04.pdf)

- Support photo simulation services to prepare computer simulation of wind turbines proposed to be constructed in various locations in Vermont.

- Support the Vermont Environmental Research Associates (VERA) with the following:

    - Development of a "Vermont Public Lands Potential Wind Resource Estimate" identifying the quantity and quality of potential wind resource available on Vermont public lands,
    - Establishment of a state wind resource reference program accelerating commercial-scale wind power development in Vermont by installing and operating a network of long-term wind resource reference stations,
    - Providing the state with publicly available wind resource documentation,
    - Production of wind resource maps for each county in Vermont,
    - Installation of measurement towers and performance monitoring and data transferal equipment , and
    - Ongoing collection, processing, and publishing of wind turbine performance reports.

The EED has also collaborated with organizations working on renewable energy issues such as Renewable Energy Vermont (REV), and Vermont Energy Investment Corporation (VEIC) on projects targeted at enhancing public understanding of renewable energy, improving investment tools for renewable energy technologies, and increasing development of small-scale renewable energy. These activities included:

- Assisting with the coordination of REV's inaugural conference.

- Addressing financing barriers for renewable energy systems by collaborating with REV, Brattleboro Savings and Loan, and Chittenden Bank's Socially Responsible Banking fund to create loan programs for PV, solar domestic hot water, and small scale wind systems.

- Maintaining a website for the Vermont's renewable energy business community that allows customers to access design, installation, maintenance, and manufacturing services related to renewable energy systems. The site also includes a wide variety of information for prospective owners of renewable energy systems, for example DOE's pamphlet *Small Wind Electric Systems* (http://www.state.vt.us/psd/Menu/EE_and_Renewable/wind/smallwindelectricsystems.pdf).

- Development and dissemination of materials related to wind energy projects in Vermont, including a video on wind power.

- Development of a professional training curriculum and certification standards for renewable energy professionals.

- Establishment of the *Vermont Solar and Small Wind Incentive Program*, which is administered by VEIC. As of August 2004 all incentives for this program ($961,000) were fully obligated for projects.

Biomass Energy

Biomass is any organic matter, which is available on a renewable basis through natural processes or as a by-product of human activity. Biomass includes: agricultural crops and wastes, wood and wood waste, energy crops, and municipal solid waste. Biomass can be converted into energy through many different means such as combustion (burning), gasification, fermentation, and anaerobic digestion. The EED has encouraged increased production and use of energy derived from biomass resources through program reports, partnerships, and education.

The Vermont Biomass Energy Program has been a cooperative effort of the DPS and the Department of Forests Parks and Recreation (FPR) for over 20 years. Through a Memorandum of Understanding (MOU) between FPR and the Department of Economic Development, the partnership has been expanded to include economic development interests and resources. This collaboration among state departments and agencies has been supported in part by the Northeast Regional Biomass Program (NRBP), a program of the Policy Research Center of the Coalition of Northeast Governors (CONEG). Funds from the U.S. DOE have supported the NRBP and the Vermont collaborative effort. These funds have, however, been declining in recent years and are no longer adequate to fund a joint FPR/DPS position.

As a result of the Biomass Energy Program, Vermont is a national leader in small-scale biomass applications. Twenty-six Vermont schools are heated with wood chips, numerous state buildings and industrial facilities use wood chip heating systems, and two state office complexes (Montpelier and Waterbury) are heated with wood-fired district energy systems. The Biomass program has worked to:

- Support development of new and improved biomass combustion and associated technologies;
- Identify opportunities for and support development of biomass energy projects, and monitor existing biomass installations;
- Develop policy guidance for appropriate biomass project development and forest resource use for energy;
- Provide information on technology, fuels, processes, and opportunities to a variety of audiences;
- Raise awareness of the opportunities offered by biomass energy to the general public as well as a variety of target audiences.

In 2001, the Department assisted with the establishment of the Biomass Energy Resource Center (BERC). BERC is a non-profit organization that assists with the development of biomass energy projects throughout the U.S. and the world. The DPS has provided DOE funding to BERC to help support the following activities and projects:

- Complete an evaluation for Ludlow Electric on the cost-effectiveness of various wood energy conversion technologies to be located on the premises of its largest electric customer, a talc processing company. Under the preliminary design, a wood-fired CHP system in the 1-5 MW size range would be owned and operated by the utility with the thermal energy sold to the host site.
- Work with the Lamoille Economic Development Corporation to explore ways that the local wood resource in this rural county could be used as a tool for economic development. Under consideration are waste wood fired power generation, CHP located at an industrial site or a campus or community CHP system linking power generation with district heating.

- Complete a study to install a wood-fired boiler at a hospital in Newport to provide space heat and process steam.

- Initiate the School Wood Energy Program, and develop a data collection form to document school energy usage and school characteristics relevant to installing wood energy plants.

- Complete biomass cogeneration feasibility studies for Smuggler's Notch Resort, Smith Inc., and Vermont Castings.

Vermont Methane Program

The Vermont Department of Public Service (DPS) and the Vermont Agency of Agriculture, Food And Markets (AAFM) received a total of $695,000 in federal grants over the past several years to promote the use of methane recovery technology on Vermont dairy farms.[7] This technology helped farmers with their nutrient management efforts and at the same time provided additional on-farm income through the generation of electricity.

The goal of this program was to identify and help overcome obstacles to widespread adoption of methane recovery technologies by Vermont farmers. The lessons learned in Vermont will have widespread applicability throughout the country. The program was designed to consider methane recovery in a broad context, taking into account its potential benefits as a component of a comprehensive nutrient management system, as a renewable energy source and as a strategy for greenhouse gas reduction.

In 2001, the DPS contracted with the BERC to manage the energy aspects of this program. The collaboration between the DPS, BERC and AGR has been one of the significant successes of the program to date. AAFM had the experience and expertise to address the manure and nutrient management issues that interact with the effort to develop anaerobic digestion projects. Likewise the DPS and BERC had the interest and experience to address the energy generation and policy issues of using manure as a renewable energy source.

Overall program activities included:

- Researching methods to reduce costs and increase the efficiency of methane recovery technologies and use;

- Developing partnerships with experts in manure management and water quality protection;

- Assessing the potential of dairy manure and other organic wastes in Vermont that could be digested on farms to produce methane and electricity;

- Establishing sites to demonstrate the viability of the technology;

- Publicizing the progress of the program;

- Working to expand the economic viability of methane projects, through innovative net metering programs.

The program conducted experiments on reducing retention time of manure in an anaerobic digester. If the retention time is reduced, a smaller digester vessel can be used which would reduce initial capital costs. Research

[7] These funds have been secured by Senator James Jeffords through federal "earmark" appropriations.

has also been completed on determining the available organic resources in Vermont that could be digested to produce methane. This research suggests that dairy manure is by far the largest source of organic material that is available for methane recovery in Vermont and that trucking this and other materials to an on-farm digester will only be cost-effective in limited circumstances.

The program also completed preliminary feasibility analyses for fifteen Vermont farms that expressed interest in this technology. Several of these analyses indicated the potential for a positive cash flow from methane production technologies. Engineering analysis and site design for interested farmers followed. .

The program established research and demonstration facilities on four Vermont farms: Foster Brothers in Middlebury, Hinsdale Farm in Charlotte, Blue Spruce in Bridport, and the Williston Cattle Company in Williston. Some of the research was completed by the Intervale Foundation, who continues to oversee some of the projects to determine their effectiveness.

In 1999 and 2002 Vermont's net metering legislation was amended. These amendments allow farms to net meter systems up to 150 kilowatts generated from anaerobic digestion, photovoltaics, wind, or fuel cells. The amendments also allows "group net metering" so a farmer can group their electric accounts together to use as an offset against the amount of electricity produced by on-site generation such as a farm based methane recovery system. This legislation combined with funds from the U.S. Farm Bill could substantially change the cost effectiveness of this technology for many farms.

Alternative-Fuel Transportation

The electric vehicle project known as EVermont was created with the support of DPS and others in 1993 to test and demonstrate electric vehicles in a cold climate and hilly terrain. The Department of Public Service has been involved with EVermont since its inception to provide organizational support, including grant acquisition and management, logistical support, project oversight, and policy direction. As a public-private partnership, EVermont earned national recognition for innovation and testing. Its projects have focused on a range of issues including thermal management of components and passenger compartment, advanced energy storage technologies such as nickel metal hydride batteries and supercapacitor, hybrid drive systems, and control systems.

EVermont became an independent non-profit organization in January of 2000. For several years it also managed Vermont's "Clean Cities" program. More recently, EVermont has specialized in producing custom alternative-fueled vehicles by contract. Meanwhile, DPS has secured a U.S. Department of Energy grant to continue operation of the Clean Cities program. It will soon select a contractor to continue the work of the statewide Clean Cities Coalition in Vermont. The Agency of Transportation and Agency of Natural Resources continue to take an active role in ongoing Clean Cities discussions.

In 2004, DPS was awarded a $75,000 Department of Energy grant to promote creation of a biodiesel market in Vermont. DPS has entered a grant agreement with the Vermont Sustainable Jobs Fund to raise awareness of biodiesel applications in the state among private and public sector fuel consumers. The biodiesel market in Vermont is in its nascent stage. This project is intended to address the many questions that exist among potential suppliers and consumers about the viability of bio-based fuels for space heating, transportation and other energy applications. The Vermont Biodiesel Association and Vermont Fuel Dealers' Association are project partners.

Vermont Superintendents Association School Energy Management Program

The Vermont Superintendents Association School Energy Management Program has assisted Vermont schools in the implementation of cost-effective energy efficiency measures since 1993. Ongoing energy savings to Vermont schools now exceed $1 million annually.

The program works in partnership with the following organizations:

- Vermont Department of Public Service, Energy Efficiency Division
- Efficiency Vermont
- Electric and Gas Distribution Utilities
- Vermont Department of Education
- Vermont Department of Forests, Parks and Recreation
- Vermont Department of Health

The program's work is not limited to one energy source or type. It routinely assists schools with:

- Biomass heating, including ongoing support to the 26 Vermont public schools which now utilize biomass systems;
- Other renewable energy opportunities;
- Electric energy efficiency, including interior and exterior lighting, motors, and controls;
- Electric, natural gas, propane, and fuel oil water and space heating; and
- Kitchen equipment efficiency.

The program has also worked with schools in the areas of:

- Utility service quality and service voltage concerns;
- Utility billing discrepancies;
- Building envelope assessments;
- Analysis of cogeneration potential;
- Vermont schools biomass heating initiative, including conducting annual Vermont school wood chip users conference;
- Participation at all Department of Education Preliminary Plan Review meetings for new school construction projects; and
- Assistance to Vermont Energy Education Program in their curriculum efforts in schools.

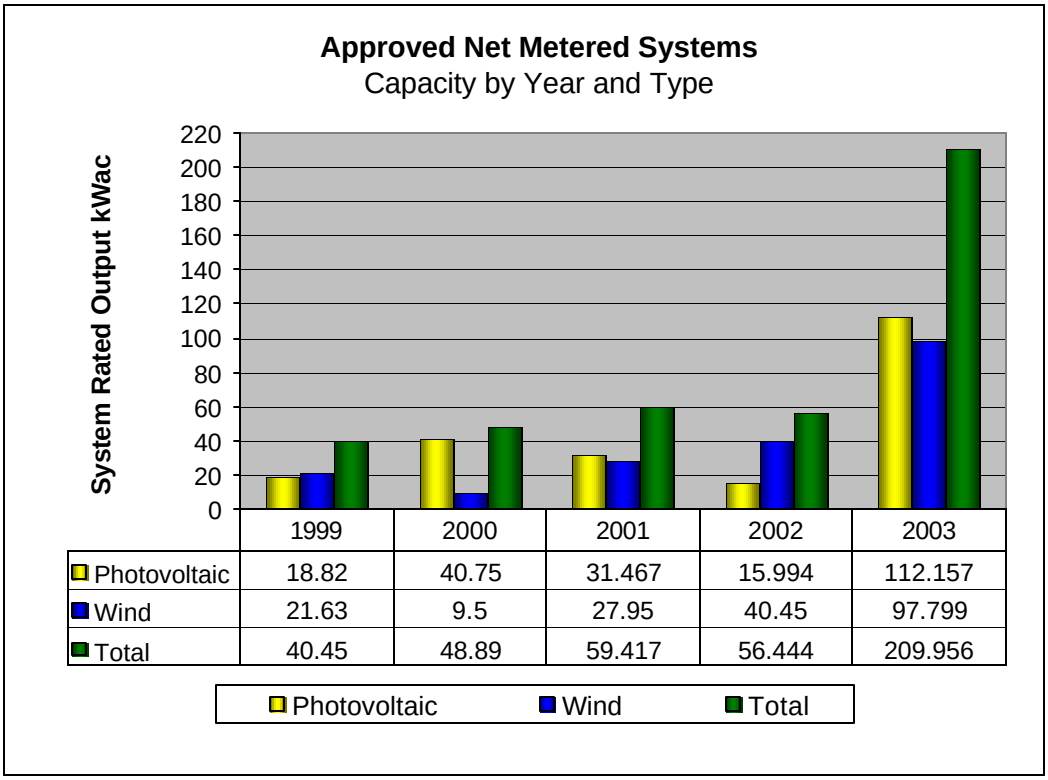
A "circuit rider" approach is utilized by the program to respond to requests for on-site energy assessments and to provide consulting services to schools.

Net Metering

The 1998 legislative session enacted the Net Metering law (30 V.S.A. §219a). Net metering allows utility customers to connect certain renewable energy systems to the electrical grid through their existing meter. This arrangement makes it possible for customers to send excess energy generated by their system back through the meter to the grid and draw that energy back through the meter when needed.

Amendments in 1999 and 2002 allowed additional systems, including certain fuel cells, farm systems, and a limited number of 150 kW renewable energy projects to qualify for net metering. As noted above, the 2002 amendment also allowed "group net metering" that allows a farmer to group their electric accounts together to use as an offset against the amount of electricity produced by on-site generation such as a farm based methane recovery system.

Figure 1- 6



The net metering statute is crafted to encourage customers to size their systems to meet primarily their own needs. In the course of a year the consumer can receive credit only for generation delivered back to the system that equals the total amount taken from the system. In effect, the customer uses the utility grid as a low-cost battery or energy storage system. Any net excess generation fed back into the grid goes to the benefit of the distribution utility at the end of the year (customers do not receive payment for the excess generation).

The Department participated actively in the PSB rule making that implemented the net metering law and proposed simple and effective interconnection rules.

The EED assists customers with net metering applications, monitors participation, and has been actively involved as the consumer advocate in the PSB proceedings establishing rules for net metering. There are currently 155 permitted net-metered systems, 142 of which have come online in the 2000-2003 period. During this period, the installed capacity of net-metered systems grew from 39 kW to 655 kW. Keeping with the trend of recent years, the majority of the growth occurred in residential applications, which account for 86% of all installed capacity, while commercial, school, farms, and non-profit applications account for the remaining 14%.

The Department supported, and the legislature passed, a sales tax exemption on equipment used in net-metered systems. In 2002 the exemption was expanded to cover solar hot water systems and off-grid renewable energy systems that meet a number of the previously established specifications for net metering equipment.

E. Engineering Division

The Engineering Division is comprised of engineers specializing in gas and electric energy production and distribution activities with a focus on safe, reliable, and efficient operations on behalf of Vermonters. The Engineering staff performs inspections at facility sites in the state, including Vermont Yankee Nuclear Power Station, liquefied petroleum gas (LP gas) sites, and electric and gas transmission and distribution facilities. The Engineering Division is responsible for reviewing facility investment plans by companies in these fields and supports the Public Advocacy Division with technical analysis and expert testimony.

Electricity

The Engineering Division addresses technical issues that affect Vermont's electric utilities and their customers. It seeks to ensure that proposed generation, transmission, and distribution facilities are properly sited and maintained, and that all electric customers are provided with high quality, reliable electric power. The Engineering Division actively promotes and reviews utilities' plans for cost-effective transmission and distribution system energy loss reduction as part of its efforts to ensure that these systems are the least cost alternatives for Vermont's ratepayers. The Engineering Division provides technical assistance to the Consumer Affairs and Public Information Division to ensure that consumer complaints are addressed in an expeditious and technically sound manner. The Engineering Division also provides technical assistance to the Department in matters concerning public safety, utility rate requests, the setting of avoided costs, financing requests, and right-of-way matters.

Transmission and Distribution Facilities

The Engineering Division devotes a significant portion of its resources to ensuring that Vermont's electric transmission and distribution systems are planned, sited, and constructed in a least-cost manner that results in a reliable electric system, consistent with environmental goals. The Engineering Division is charged with analyzing, from a technical and financial perspective, plans for all new and upgraded transmission lines and substations in the state. It then negotiates with the relevant utility to modify, advance, or cancel its proposal. Ultimately, the Engineering Division provides an independent recommendation to the PSB to approve, disapprove, or modify planned facilities pursuant to 30 V.S.A. ' 248. In conjunction with the Planning Division and the integrated resource planning process, the Engineering Division also ensures that electric distribution systems are planned and constructed in a manner that is consistent with Vermont statutes, Public Service Board Orders, and the *Vermont Electric Plan*. The *Vermont Electric Plan* is available on the DPS Web site at http://www.state.vt.us/psd/index/2005%20Electric%20Plan.pdf.

Distributed Utility Planning.

The Engineering Division coordinates with the Energy Efficiency Division and the Planning Division to promote the newly emerging concept of Distributed Utility Planning (DUP) in which utilities plan for and install small, localized generation and demand side management resources in an effort to avoid or defer major investments in transmission and distribution infrastructure, provide customers with premium quality power, and provide enhanced environmental performance. As part of this effort, the Department has engaged in a formal collaborative with Vermont's electric utilities to promote DUP and to mutually address the regulatory, technical, and financial hurdles to successful implementation of distributed resources. (For more information on Distributed Utility Planning, see *Distributed Utility Planning: Concepts and Issues* on the DPS Web site at http://www.state.vt.us/psd/Menu/EE_and_Renewable/dup.htm .

Energy Loss Savings

The Engineering Division, in conjunction with the Planning Division, continues to promote comprehensive, least-cost transmission and distribution planning studies among Vermont's electric utilities. Successful planning results in the cost-effective reduction of energy losses throughout Vermont's transmission and distribution infrastructure. These studies include significant efforts in system measurement, engineering modeling, and financial analysis that, when completed, provide utilities with a blueprint for upgrading their systems in a reliable, least-cost manner. The Engineering Division provides software, training, and technical advice to the utilities engaged in these studies. It also provides oversight to ensure that completed studies are consistent with Vermont statutes and Board orders. Besides providing cost-effective transmission and distribution system energy loss savings, these studies result in significant gains in reliability, power quality, and safety. Considering only energy loss savings, more than 2 MW of cost effective savings have been identified through these studies resulting in a net savings to Vermont electric utility customers of over $3 million.

Reliability.

The Engineering Division focuses on the reliability of the transmission and distribution facilities that deliver electricity to Vermont consumers. A uniform method for measuring reliability among Vermont's electric utilities has been developed. Also, the establishment of reliability goals for Vermont's electric utilities is now in progress. (See Section 2.F. for more on the reliability of the state's electric systems.)

Transmission.

The Engineering Division focuses on the reliability of facilities that deliver electricity to Vermont consumers. Of special interest are the steps taken by the Vermont Electric Power Company (VELCO) to provide reliable transmission of bulk power in Vermont.

To address problems that could arise from the loss of critical components, VELCO has undertaken a study of the consequences of major contingencies - outages to critical facilities - to identify steps that could be taken in the event of a catastrophic loss of a major piece of equipment. As a result, VELCO has plans in place to rapidly respond to such unplanned, major contingencies.

VELCO has also undertaken significant capital upgrades in the past several years to serve growing electric load in Vermont. These upgrades include increasing the voltage of a major transmission line between Cavendish and West Rutland, installing capacitors and new transformers in critical substations, integrating portions of the Vermont Electric Cooperative transmission system into the VELCO system, and installing in Essex a static compensator - a complex solid state device that provides critical voltage support to the transmission system in the event of an unexpected loss of a transmission line.

Over the past several years, VELCO has also focused much of its planning efforts on the delivery of power to northwest Vermont, the region of the state experiencing the fastest growth in electric load. VELCO studies indicate that as load continues to grow, significant transmission upgrades are required, including new transmission lines along existing corridors between West Rutland and New Haven, and between New Haven and South Burlington. VELCO has applied to the Public Service Board for authority to construct these upgrades. (A decision from the Board was made in January 2005 following the biennium covered in this document.)

VELCO, together with the Burlington Electric Department and Green Mountain Power Corporation, are also evaluating options to address reliability concerns within the Chittenden County area as loads continue to grow. Among these options are upgrades to existing lines, the addition of new, higher voltage lines within existing

corridors, conservation, and strategically placed generation. The Department closely monitors these developments and is collaborating with Burlington Electric Department and Green Mountain Power Corporation, using distributed utility planning methods, to ensure that the plans developed to reliably serve growing loads in Chittenden County will be the least-cost solution available. (See Section 1.E. for further discussion of distributed utility planning.)

Distribution

Reliable delivery of electricity by the various electric distribution systems in Vermont is critical to the safety, health, and economic well-being of Vermonters. As part of its ongoing efforts to improve Vermont=s electric system reliability, the Department has worked closely with the state=s electric utilities to develop uniform statewide standards for electric system reliability measurement and reporting. Uniform measurement and reporting allows for the evaluation of reliability trends, enhances meaningful comparisons of reliability among utilities, and provides information valuable for the design and subsequent assessment of system upgrades and corrective measures. The Legislative Committee on Administrative Rules codified this effort when it approved Public Service Board Rule No. 4.900 - Electricity Outage Reporting. Calendar year 2001 was the first year for Vermont=s electric distribution utilities to report their reliability performance under the uniform methods prescribed in Public Service Board Rule No. 4.900.

As part of its effort to establish electric utility service quality and reliability plans (SQRP), the Department has worked with the electric utilities to set minimum expected reliability goals. These reliability goals are set for a given calendar year and measured using the rules codified in Public Service Board Rule No. 4.900.

Homeland Security

The safety and security of Vermont's utility infrastructure has always been a priority of the Department of Public Service. The events of September 11, 2001 demonstrated the need for measures and contingencies above those previously deemed necessary.

Since 9/11 there have been many changes. The Vermont Homeland Security Unit of the State Police is the lead agency in charge of crisis management during an act of terrorism in Vermont. The mission of the Homeland Security Unit is to enhance public safety by promoting a coordinated terrorism response among Vermont's emergency response agencies. The Homeland Security Unit recognizes that state and local government, emergency first responders and the citizens of the state must work together toward the common goal of protecting all Vermonters. This unit has developed the First Responder Plan to an Act of Terrorism in Vermont. This plan details first response guidelines and operational plans for local, regional and state level response agencies. The Governor also divided the state into four terrorism management districts that mirror the current State Police troop districts.

Also after 9/11, all utility companies have increased the security at power facilities including nuclear plants. Vermont's nuclear power plant - Vermont Yankee - has contingency plans and support agreements with state/local law enforcement and Vermont Emergency Management in the unlikely event of a terrorist attack. This includes evacuation plans for the surrounding areas. These plans are updated regularly and exercised several times a year. The State of Vermont, the U.S. Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) monitor Vermont Yankee's existing security practices and provide feedback for future security and operational planning.

The Department of Public Service was asked by the Homeland Security Unit to assist in coordinating and directing the utilities' efforts for homeland security. A primary task the Department undertook was the coordination of emergency communications capabilities among the utilities in the event of an incident. The Department accomplished this by facilitating the adoption of the existing VELCO emergency communications system to accommodate the additional needs necessary for homeland security. The Department continues to conduct

quarterly meetings to review security issues and to promote cooperation among the utilities and the Homeland Security Unit.

New England Regional Transmission Operator (ISO-NE)

ISO-NE is the control area operator for the New England electric pool, formerly known as NEPOOL. ISO-NE has responsibility for both the operation of the grid and the electric marketplace. ISO-NE plays an important role in the region by serving over 6 million customers. ISO-NE operates the largest energy focused activity in New England and its actions have a direct and immediate bearing on consumers in Vermont. The Division monitors and intervenes in regional initiatives that stem from this operation on behalf of Vermonters.

The Division also supports NESCOE (New England States Committee on Electricity) activities as envisioned by the NEGC (Appendix attached). This very important work is focused on assuring resource adequacy through thoughtful system expansion. Numerous industry technical committees forecast and plan system growth while the Division monitors projects to assure expenses remain reasonable and commensurate with needs. One of these committees Transmission Expansion Advisory Committee (TEAC) publishes the Regional Transmission Expansion Plan (RTEP). It is developed in a collaborative manner and maintained by the ISO-NE for all participants. This work product is widely regarded as the definitive document on electric transmission planning and VT utilities are subject to it determinations.

Transmission Open Access

The DPS and its Engineering and Planning Divisions participate in U. S. Federal Energy Regulatory Commission (FERC) cases related to transmission in Vermont and the region. The Department continues to be involved in the review and application of FERC Orders that require open access to the transmission system. The Engineering Division provides input and reviews proposals to restructure the electric industry in Vermont. The Division contributes to the New England Conference of Public Utility Commissioner's (NECPUC) efforts to support the continued development of the New England Independent System Operator (ISO). (On February 1, 2005, the New England ISO, formally changed to a Regional Transmission Organization (RTO) but is still referred to as the ISO.) The ISO is responsible for the reliable operation of the high voltage transmission grid in New England and for overseeing the development of a robust, competitive wholesale electric market in New England. The Department, alone and in conjunction with NECPUC, participates in regional meetings and FERC dockets on issues associated with the development and implementation of the restructured New England Power Pool (NEPOOL) agreement and NEPOOL's ISO-administered open access transmission tariff.

The most significant activities during the 2000-2002 biennium included participation in the NEPOOL Regional Transmission Expansion Plan (RTEP) process through the Transmission Expansion Advisory Committee (TEAC) group at ISO-NE. RTEP is a transmission forecast and construction plan to maintain system reliability in New England. DPS has contributed in a large way on refocusing TEAC on a least cost-planning model, rather than exclusively relying on transmission upgrades for all purposes.

Northeast Regional Transmission Organization (NERTO)

NERTO was the second major activity impacting transmission during the 2000-2002 biennium. The NYISO and ISO-NE announced their intentions to merge the organizations and create an RTO in accordance with FERC's criteria as outlined in Order 2000. The Department has taken the position that the results from the cost benefit study that define the merger does not support going forward. New England costs are forecast to increase as a result of the merger. Consequently, the Department has encouraged ISONE to focus on correcting the seams issues and eliminating artificial barriers that restrict competitive transactions between transmission grids.

New England Regional Issues and Development of Competitive Electric Markets

The Department also monitors the restructuring efforts - named Standard Market Design (SMD), of FERC and ISO-NE closely to measure the impact on VT. Often working with NECPUC, but frequently seeking smaller groups of like-minded partners, the Department files comments on behalf of Vermonters in the interest of controlling escalating electric energy costs.

Two major - complementary but independent, reforms were commenced during the 2000-2002 biennium. ISO-NE filed their SMD proposal in May 2002 for the purpose of replacing the current market system with a new version built on the PJM platform that will introduce Multi Settlement System (MSS) and Locational Marginal Pricing (LMP). This system went live 3/1/03 introducing congestion pricing to all New England customers.

In August of 2002 , FERC issued their SMD NOPR which mandated sweeping changes in the electric market and structure of transmission organizations. In some ways the NOPR moots ISO-NE's compliance filing by overlaying additional requirements such as elimination of the ICAP market and the creation of Demand Response (DR) Resources. DPS will follow this activity closely since it will markedly impact the future of ISO-NE , VELCO and the electric marketplace.

New York Power Authority (NYPA) Hydropower

The Department is the designated negotiating agent for the purchase of low cost hydropower from NYPA's St Lawrence and Niagara projects. These contracts expire in 2003 and 2007 respectively and efforts are currently underway by DPS and the other Outside State Agents (OSA) to retain an 8.5% share of the project, of this hydro resource for their states. NYPA, in contrast, while seeking relicensing authority from FERC, is simultaneously attempting to keep all hydro generation within New York and thereby exclude sales to the OSA's.

Presently, Vermont receives about 13 MW of base power from the St Lawrence and Niagara power facilities in NY. This resource is distributed solely as preference power by municipal utilities. Losing this low-cost power and replacing it with market purchases would increase costs to customers served by municipals.

Nuclear Power

The Engineering Division carries out an on-site inspection program at Vermont Yankee Nuclear Power Station (VY). Activities at Vermont Yankee are monitored, and the administration and the legislature are kept informed of important events at this nuclear facility. The Engineering Division is the primary contact between the U.S. Nuclear Regulatory Commission (NRC) and the state concerning nuclear plant safety issues. During the 2000 to 2004 period, the Engineering Division provided analysis and expert witness responsibilities for evaluating the sale of VY to Entergy Nuclear Vermont Yankee, LLC, and for evaluating the proposed 20% increase in VY power level (extended power uprate). The Engineering Division is also a participant in the Nuclear Waste Strategy Coalition, a national consortium working toward a safe and effective national solution for the disposal of spent nuclear fuel. The State Nuclear Engineer, within the Engineering Division, is Vermont's representative on the Texas Low-level Waste Disposal Compact Commission. The Engineering Division provides the state's representative on the Northeast High-Level Radioactive Waste Transportation Task Force, a regional group established by DOE. The Division also provides staff support to the Vermont State Nuclear Advisory Panel (VSNAP). (See 2.G. for more information on nuclear power.)

Natural Gas and Propane

The Engineering Division is responsible for managing a certification agreement between the U.S. Department of Transportation and the State of Vermont. Under this agreement, Engineering runs a program that consists of training, inspections, development, and enforcement of regulations associated with the Natural Gas Act of 1968

and subsequent revisions to the Act. The program involves natural gas companies and some LP gas companies with certain types of accounts. The Engineering Division also works with other state agencies, State police, Emergency management and Fire Marshals to provide training, technical advice, inspection and enforcement assistance, incident investigation, and emergency response concerning gas safety related matters. In addition post 9/11 pipeline security has become a concern of the U.S. Office of Homeland Security.

The Department of Public Service directs several safety initiatives related to gas pipelines. In addition, we promote damage prevention activities related to underground electric, telecommunication, and cable television Compliance, enforcement and outreach programs accompany these initiatives. These programs are administered by the DPS in partnership with the US Department of Transportation (DOT).

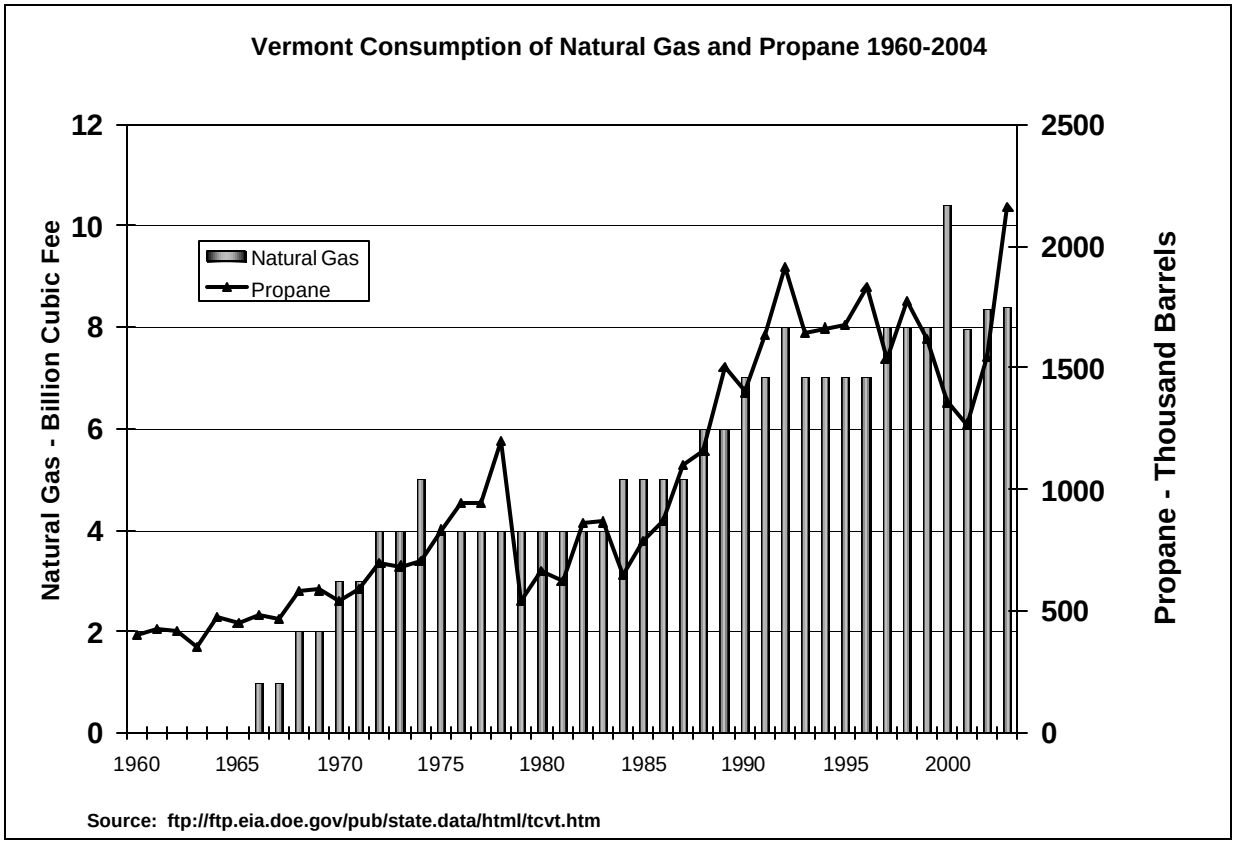
Noteworthy federal/state initiatives directed at pipeline safety include Gas Transmission Pipeline Integrity Management and Operator Qualification (OQ) Certification. The DPS also promotes and administers Underground Damage Facility Prevention initiatives protecting infrastructure from excavation damage. This effort -- often referred to as "Dig Safe" -- aims to protect Vermonters from utility service disruptions due to excavator or utility errors.

The DPS frequently provides outreach activities to help improve safety performance. For example, we have recognized the limited resources of small businesses operating liquid petroleum gas (LPG) pipelines and offered to jointly develop an OQ template with the VFDA to facilitate compliance. We also offer periodic Dig Safe seminars that provide remedial training for excavators and utilities who fail to observe good damage prevention practice. The Department maintains membership and communicates with the National Association of Pipeline Safety Representatives regarding reasonable safety regulations applicable to this type of pipeline systems.

The DPS has an agency agreement with DOT Office of Pipeline Safety and is responsible for ensuring compliance with federal and state gas safety codes and underground facility damage prevention statutes/Public Service Board Rules. Safety inspections of the design, construction, operation and maintenance of interstate natural gas transmission/distribution and certain LPG pipelines are conducted by the DPS. The DPS receives, investigates and processes reports of underground facility damage as well as gas safety violations and makes determination of appropriate civil penalties.

Historically natural gas use in Vermont has been expanding at approximately 4% per year for the period 1990-2000 (State Energy Data Report, DOE/EIA at *ftp://ftp.eia.doe.gov/pub/state.data/html/tcv t.htm* Table 287). A high of 10.4 billion cubic feet consumption was reached in 2000 . A slow down in the economy and a milder winter in 2001 resulted in a decline in consumption of 23% back to a level slightly below 1999 consumption. The bulk of the decline was from the industrial sector.

Figure 1-7



Vermont Gas has completed another phase (4.6 miles of 16inch pipe) of the looping project. The new loop, an added pipe along part of the existing transmission line which is connected in parallel to it, gives additional capacity to their system, and ensures continued supply in the event that one line has to be taken out of service. (See Section 4. for more information on Vermont Gas Systems.)

Propane (liquid petroleum gas or LP gas) usage in Vermont has been declining at approximately 3% per year for the period 1990-2000 with a 6% decline from 2000-2001 *(State Energy Data Report, DOE/EIA)*.[8]

A new LP storage facility in Berlin has come online. The facility has the capacity to unload 10 rail cars (30,000gal). This facility is estimated to save over 250,000 miles of over road transport annually, this is especially important during winter storms.

[8] *At ftp://ftp.eia.doe.gov/pub/state.data/html/tcvt.htm Table 287*).

F. Finance and Economics Division

Tariff Filings.

The Finance and Economics Division is responsible for initial review and recommendations regarding tariff filings and the preparation and presentation of financial testimony before the PSB, as well as other jurisdictions. In Fiscal Year 1999, 482 tariff filings were reviewed, and in fiscal year 2000, 616, tariff filings were reviewed. For FY2001 and 2002, the state's regulated utilities made 556 and 604 tariff filings that the Economics Division reviewed. For FY2003 and 2004, the state's regulated utilities made 825 and 862 tariff filings that the Economics Division reviewed

The Finance and Economics Division also prepares cost reports and other financial reports for internal and external use and handles sales of electricity as authorized under 30 V.S.A. §§211 and 212.

Special Contracts.

When an electric, gas, or telecommunications company proposes to offer a customer any product or service not covered in a current, approved rate or tariff, a PSB approved special contract is a prerequisite (30 V.S.A. § 229). The Finance and Economics Division coordinates the Department's review of all special contracts between a utility and a customer.

During FY2000, 101 special contracts were submitted by the utilities for review by the Finance and Economics Division. The PSB approved 98 of the contracts, 84 of which were electric contracts, 12 were gas contracts, 2 were telecommunications service contracts. Of the remaining 3 contracts two electric special contracts reviewed by the Economics division received adverse recommendations to the PSB and a third was withdrawn by the utility.

During FY2001, 60 special contracts were reviewed by the Finance and Economics Division and approved by the PSB; 26 were electric contracts, 13 were gas contracts, 11 were for telecommunications services. An additional 2 electrical special contracts reviewed by the Economics division received adverse recommendations to the PSB.

During FY2002, 46 special contracts were reviewed by the Finance and Economics Division and approved by the PSB; 30 were electric contracts, 13 were gas contracts, 2 were for telecommunications services. An additional 2 electrical special contracts reviewed by the Economics division that were later withdrawn.

An additional 75 special contracts were filed in response to the PSB Investigation into Load Response Programs for Vermont Electric and Gas Utility Companies (Docket 6555). The Board places a high priority on providing customers with load response options and an investigation was commenced into whether and under what conditions this Board should approve load response programs offered broadly to all Vermont electric and gas utility customers.

During FY2003, 91 special contracts were reviewed by the Finance and Economics Division and approved by the PSB; 44 were electric contracts, 18 were gas contracts, 29 were for telecommunications services. An additional 3 electrical special contracts reviewed by the Economics division that were later withdrawn.

An additional 42 special contracts were filed in response to the PSB Investigation into Load Response Programs for Vermont Electric and Gas Utility Companies (Docket 6555).

During FY2004, 37 special contracts were reviewed by the Finance and Economics Division and approved by the PSB; 15 were electric contracts, 6 were gas contracts, 16 were for telecommunications services. An additional 2 electrical special contracts reviewed by the Finance and Economics Division that were later withdrawn.

In 1985, the Department was authorized by 30 V.S.A. §212a to add to its long standing wholesaling of electricity to Vermont utilities the retail sale and distribution of electricity to all Vermont residential customers. From 1985 until July 1, 1995, the DPS was involved in the retail sales of St. Lawrence and Ontario Hydro power and energy. On July 1, 1995, due to reduced allocations of St. Lawrence power, unfavorable rulings regarding Ontario Hydro sales, and termination of contracts between the Department and the state's distribution utilities, the DPS ceased retail sales altogether. In September 1994, the Hydro Quebec contract expired. Since then, the Department has had very little presence (less than 1 MW) in the Hydro Quebec market, using the 1985 interconnection agreement.

The Department purchases power from the St. Lawrence project and resells it to the state's distribution utilities at wholesale on a non-profit basis. DPS serves as a bargaining agent for Vermont's municipal and cooperative utilities in the acquisition of Niagara power and energy from the New York Power Authority (NYPA).

Gross Revenue Tax.

By statute, each person, partnership, association, and private or municipal corporation conducting a business subject to the supervision of the Department of Public Service and the Public Service Board must pay an annual tax on its gross revenues to fund the operation of the Department and Board. Tax rates that have been in effect over the last two year period for this report and that are currently in effect are shown in the following table.

Table 1-11

Gross Revenue Tax Rates
(Revenue per dollar of gross revenue)

Type of Company	FY03-FY04
Electric	0.0050
Telephone	0.0050 (or $500 if greater)
Gas	0.0030
Water	0.0010 (or $5.00 if greater)
Cable TV	0.0050 (or $25.00 if greater)
Customer Owned, Pay Telephones	0.0050 (or $20.00 if greater)
Revenue Greater than $5,000	0.0050
Revenue Less than $5,000	0.0050 (or $20.00 if greater)
For All Other Companies (i.e. sewer)	0.0010

DPS Financial Summary

Table 1-12 provides an overview of the Department's sources of income and expenditures for fiscal years 2001 through 2004. FY01 closed with an ending balance of $251,661. FY03 closed with an ending balance of $952,887. FY04 closed with an ending balance of $319,466.

Table 1-12

DEPARTMENT OF PUBLIC SERVICE FINANCIAL SUMMARY

	FY2001	FY2002	FY2003	FY2004
INCOME		(Dollars)		
Cash Balance Brought Forward	81,036	251,661	440,936	952,887
Adjustment to Carry Forward*			66,190	
Gross Revenue Tax Receipts	3,189,258	3,322,026	3,351,091	3,401,589
Reimbursement by:				
Administration of Power	10,926	16,130	16,307	23,543
Federal Grants	752,363	898,318	901,454	1,034,056
Rate Case Reimbursement	748,011	1,173,553	899,085	458,659
Sale of Service	0	0	0	0
Miscellaneous Receipts	0	0	0	0
Interdepartmental Transfer	2,538	23,614	15,857	13,933
Anticipated Receipts	0	0	0	0
Total Funds Available	4,784,133	5,685,303	5,690,920	5,884,667
Finance Adjustment				
EXPENDITURES				
Personal Services	3,687,293	4,390,311	3,717,207	3,649,597
Operating	495,275	491,081	448,682	485,106
Grants	349,904	362,976	494,941	986,379
Other	0	0	77,204	444,119
Total Disbursements	4,532,472	5,244,367	4,738,033	5,565,201
Transfer to General Fund				
Ending Balance	251,661	440,936	952,887	319,466

* Reflects Changes due to conversion to VISION Accounting System

G. DPS Communications with the Public

Published Reports And Plans. During The 2000-2004 Biennia

The Department had issued the following reports in addition to prefiled expert testimony and briefs too numerous to list here.

Planning Documents with Public Input Processes:

2000 *Vermont Telecommunications Plan*: August 2000

Regularly Published Reports:

Annual Reports of the Lifeline Telephone Program: 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Biennial Reports: July 1, 1992 - June 30, 1994, July 1, 1994 - June 30, 1996, July 1, 1996 - June 20, 1998, July 1, 1998 - June 30, 2000
Vermont State Nuclear Advisory Panel (VSNAP) Annual Reports: June 1995, March 1996, August 1998, June 1999, January 2002

Technical Reports:

48. *Vermont Residential Fuelwood Assessment* 1997-1998 - December 2000
49. *Broadband Deployment and Taxation Policy in Vermont*: December 2000
50. *A Study on the Safety of Small Emergency Backup Generation Systems* - January 2001
51. *Vermont Updated Energy Price Forecast* - June 2001
52. *Wholesale Electricity Market Price Forecast, DPS 2001* - December 2001

The 2002-2004 Biennium,

Planning Documents Input Processes:

Vermont Electric Plan 2004: Public Comment Draft: August 6, 2004

Regularly Published Reports
Vermont Telecommunications Plan: September 2004

Published reports after the 2000-2004 Biennia

Published reports after the 2000-2004 bienniums include:
Vermont Telecommunications Plan, v. 4.0. September of 2004 (adopted)
Vermont Electric Plan, January 19,2005 (adopted)
Vermont Commission on Wind Energy Regulatory Policy, December 2004

Source: DPS Planning Division Librarian

DPS Web Site and Its Use.

The DPS web site has grown into a large and varied source for information about Vermont utilities and current PSB dockets and cases, as well as the Department's reports and plans and links to other government and public utility sites. DPS views its web site as an effective channel for communicating with the public and places a high priority on updating material as soon as possible.

Highlights of the DPS Web site include:

- What's New section, with links to the most current and important issues confronting the DPS.
- Weekly Public Advocacy Report which contains a schedule of PSB Hearings and lists of PSB Orders issued the prior week, including DPS' filed testimony in important cases.
- An archive of press releases issued by the DPS.
- Consumer Information and Alerts regarding winter utility disconnections, performance data about Vermont utilities, consumer protection advice, and other consumer resources.
- Vermont utility information from the DPS Biennial Report and other sources.
- Energy efficiency and conservation information including programs for schools, local governments and low income groups, Residential Building Energy Standards for energy efficiency in new construction, Vermont retail prices for heating fuels and gasoline, and a list of free energy efficiency publications.
- A list of DPS reports, many of which can be downloaded from the Web site.

Information on the Web site changes frequently. Those interested in utility matters or wanting to know more about the coming age of competition in the telecommunications and electric industry should visit the DPS Web site at http://www.state.vt.us/psd or send an email to vtdps@state.vt.us.

2. Electricity

Electricity in Vermont is provided through 21 vertically integrated electric distribution utilities and a single transmission company, the Vermont Electric Power Company (VELCO). Vermont electric distribution utilities range in size from the Village of Readsboro Electric Department (with 412 customers), to CVPS (with 144,216 customers). Vermont utilities are interconnected to the New England regional electric transmission system (the New England "grid"). Electricity flows between generators and load centers throughout the New England region. The New England grid is also interconnected with New York and Canada. The regional electricity market, and regional network transmission is managed and controlled by a regional transmission organization, known as ISO-NE. The following section described major events that have affected Vermont electric utilities during the July 1, 2001 - June 30, 2004 period.

A. New Issues and Developments

ISO New England

As part of the wholesale electric industry market reforms, FERC established regional Independent System Operators (ISOs) through its Order 888. ISO New England Inc. (ISO-NE) was established as a not-for-profit, private corporation on July 1, 1997 following its approval by FERC, to manage the New England region's electric bulk power generation and transmission systems and administer the region's open access transmission tariff. Through the term of the 2000-2004 biennia, ISO New England Inc. contracted with New England Power Pool (NEPOOL) to operate the bulk power system and to administer the wholesale marketplace. NEPOOL membership has become much more diverse, including brokers, marketers, and new generation owners, as well as distribution companies and, for states like Vermont, traditional electric utilities.

ISO New England operates a "day-ahead hourly" marketplace. Wholesale electricity suppliers and generators bid their resources into the market the day before and submit separate bids for each resource for each hour of the day. ISO New England tabulates the bids and stacks them in dollar terms from lowest to highest, matching the expected hourly demand forecast for that hour and each hour in the next day. ISO Operation's staff determines the least cost dispatch sequence that reflects actual bids. Generators are dispatched to match the actual load occurring on the system. The highest bid resource that was dispatched to meet actual load sets the Market clearing price for electricity that is paid to all suppliers by buyers who purchase power from the market.

Utility Integrated Resource Plans.

Vermont distribution utilities file plans with the Public Service Board as part of a regulator utility planning process. Pursuant to Vermont Statutes (30 V.S.A. ' 218c.), Vermont's electric and gas utilities prepare these documents as long range "Integrated Resource Plans" or "IRPs". These utility plans are designed to deliver electricity service at the least cost to consumers, giving due consideration to available supply alternatives, transmission options, distribution, and customer opportunities for utility-delivered energy efficiency (or demand-side management). Since the establishment of the Efficiency Utility in 2000, system-wide demand-side management has been delivered through the Efficiency Utility rather than Vermont distribution utilities.

Public Service Board General Order 45/PSB Rule 5.200

Due to changes in the electric markets, it became apparent that an update to the reporting requirements applicable to Vermont electric utilities under the Board's General Order 45 (GO 45). That General Order required 90 days advance notice to the Board and Department of purchase and sale transaction; the restructured wholesale markets described above made such notice difficult to provide. The Department proposed an experimental replacement that consists of (1) after-the- fact electronic reporting of power supply transactions, (2) a Resource Report to be filed

once a year by each utility generally reflecting the utility's power supply needs and acquisition strategies, and (3) a waiver from GO 45(e)&(f)'s advanced reporting requirements for any transaction that falls within the purview of the Resource Report. This proposal was approved by the Board as a waiver to GO 45 as an experiment for 18 months, after which the efficacy of this proposal would be revisited. On March 1, 2004, the PSB rescinded General Order 45 and placed into effect PSB Rule 5.200 which adopted the replacement provision described above.

B. Major Cases During the 2000- 2002 Biennium

Following is a summary of the most significant cases litigated by the DPS before the Public Service Board during the 2000-2002 Biennium.

Docket 5841/5859 - Citizens Utilities Company, now Citizens Communications Company d/b/a Citizens Energy Services, probation case

As reported in previous Biennial Reports, in June 1997 the PSB found that good cause had been shown to revoke Citizens' franchise to provide service in Vermont. However, the Board instead placed Citizens on probation for a minimum of five years, and appointed a Special Master to oversee the Company's compliance. Any material non-compliance with the terms of probation would render Citizens' franchise subject to revocation. (The Board's Order was affirmed by the Vermont Supreme Court in December 2000.) Audits of certain Citizens' plant accounts, completed in March 2001 and subsequently modified by stipulation of the parties, showed them to be significantly over-stated, leading to a reduction in rate base of over $6 million. The Special Master's Final Report, filed September 2002, concluded among other things that the Company had failed to comply with probation terms requiring review and justification of costs allocated to the Vermont division from corporate headquarters. The Final Report also indicated violations of other terms of the Board's orders. Meanwhile, Citizens decided to become a pure telecommunications company, and has since sold its other utility properties including the Vermont Electric Division. See summary of Dockets 6825, 6850/6853 & 6917 elsewhere in this section.

Docket 6120/6460 - CVPS rate cases

This docket was the result of the Public Service Board consolidating two rate increases requested by Central Vermont Public Service Corporation. The first stemmed from a 1998 request for a 12.9% increase in rates. The second stemmed from a 2000 rate request for 7.6%. The primary issue in the case was whether CVPS should get full recovery for its Hydro-Quebec contract. The docket had serious implications for the financial health of CVPS because of the risk of potential significant rate disallowances due to imprudence and the application of the used and useful doctrine. Access to capital markets was at issue just as it was for GMP in its earlier case involving cost recovery for its Hydro-Quebec contract, Docket 6107. A balance needed to be struck between the ratepayers and the shareholders. It was not in the ratepayers= or the state=s best interest to have CVPS become insolvent. Accordingly, the DPS reached a settlement with CVPS that included a 3.95% rate increase effective with bills rendered on or after July 1, 2001 and approved a previous temporary increase earlier established in docket 6120. The settlement included among other things a rate freeze through the end of 2002 (absent extraordinary circumstances), a cap on CVPS' return on equity, and a Service Quality Plan for consumers. In exchange, the Department and CVPS requested that the Board impose no further rate disallowances due to past actions associated with the HQ-VJO contract. The Board accepted the settlement in an order dated 6/26/01. The settlement and Board Order returned CVPS to the path of financial stability.

Docket 6270 - Investigation into the Small Independent Power Producer contracts.

This case was an investigation into independent power producer purchase power contracts resulting from a petition filed by Vermont retail electric utilities. The Docket was opened on September 3, 1999 in response to a petition filed by 18 of Vermont's retail electric utilities seeking a variety of relief that was intended to lower the costs of independent power purchased under a number of long-term contracts between Vermont Qualifying Facilities (QFs) and the Board-appointed purchasing agent for Rule 4.100. In January of 2002, after approximately two years of contentious proceedings, and without ever reaching the point of technical hearings, the remaining retail electric utilities (some had withdrawn by this time) and the QFs filed a proposed settlement. The proposed settlement created savings for retail customers through the reduction or elimination of certain costs imposed on the QFs under the contracts as written and also included a general settlement payment from the QFs above and beyond the cost-based savings created by the settlement. Total estimates of rate-payer value ran as high as $16 million, although DPS saw a portion of the figure as speculative. The Board approved the proposed settlement with conditions by Order dated January 15, 2003. Currently, the Board-appointed Rule 4.100 purchasing agent is negotiating with the QFs in an attempt to procure further savings through securitized buy downs of the contracts.

Docket 6290 - Distributed Utility Planning

This docket was an investigation into distributed utility planning (DUP) opened by the Board on September 30, 1999. The investigation grew out of a settlement in an earlier docket concerning the Department's energy efficiency plan filed in 1997. DUP concerns the development and implementation, where cost-effective, of energy efficiency and local generation options to avoid or defer transmission and distribution projects. The docket began with a four-month collaborative and subsequent negotiations among the Department and the electric utilities. These activities resulted in a "Phase I Stipulation" filed with the Board on September 22, 2000 and subsequently approved. In that stipulation, the DPS and the utilities agreed to a set of initial DUP guidelines to direct utility DUP activities and to a detailed work plan for a "Phase II collaborative." A few utilities did not sign the Phase I Stipulation and sought an order from the Board nonetheless requiring their inclusion in the Phase II collaborative, which was denied in 2001. After over a year of significant effort, the collaborative participants filed a Memorandum of Understanding (the "MOU") on October 10, 2002. The MOU was signed by 7 of the state's 22 electric utilities, including CVPS and GMP. The MOU contained various agreements regarding DUP, including but not limited to an agreement among the Department and certain utilities to convene area-specific collaboratives ("ASCs") to try to work out mutually agreeable solutions to specific areas in which DUP analysis and implementation should be performed. The Board approved the MOU on January 25, 2003. In subsequent orders, the Board approved agreements between DPS and the remaining electric utilities in which these utilities agreed, among other things, to most of the substance of the MOU. The docket is now closed.

Docket 6300 - Proposed Sale of Vermont Yankee to AmerGen Vermont, LLC

On October 15, 1999, the owners of Vermont Yankee Nuclear Power Station announced an agreement to sell the nuclear plant to AmerGen Vermont, LLC (AmerGen). AmerGen Vermont, LLC, was a wholly-owned subsidiary of AmerGen Energy, LLC, which was in turn a 50/50 partnership between PECO Energy of Philadelphia, and British Energy of Edinburgh, Scotland. This transaction required a finding by the Public Service Board that the sale promoted the general good of the state of Vermont. In addition, approvals would have been required from federal agencies.

The sales agreement provided that AmerGen would pay a purchase price of $23.5 million for closing on July 1, 2000, decreasing to $10 million for closing on December 1, 2000. The Vermont Yankee decommissioning trust fund would be topped off by present owners by an amount of approximately $34 million, to a value at closing (12/01/00) of $297 million. Other conditions were also included in the sales agreement.

The review of the proposed sale at the Public Service Board occurred in PSB Docket No. 6300 in 2000. Besides the petitioners and the Department, the following were parties in the docket: the Conservation Law Foundation, the Vermont Public Interest Research Group, the Citizens Awareness Network, the New England Coalition on Nuclear Pollution and the International Brotherhood of Electrical Workers.

The Department provided extensive testimony on the economic and safety aspects of the transaction, as well as on prudence and used and useful issues. Although originally the Department found a small economic benefit (approximately $10 million over 12 years) to Vermonters resulting from the sale mainly because the fixed-price power purchase agreement was beneficial to Vermonters after 2001, the market for nuclear plants was rapidly changing at that time so that the Department had to reevaluate the proposed transaction over the course of the docket in light of the changing environment.

In the final analysis, the Department found the sale did not promote the general good of the state of Vermont because the purchase price was not high enough. The Department also concluded the prudent and used and useful determination required by the sales agreement could not be granted. The Department and other parties recommended dismissal of the Petition. The Board dismissed the Petition in early 2001.

Docket 6545 - Sale of Vermont Yankee Nuclear Power Station.

This docket encompassed the second proposed sale of Vermont's only nuclear power plant, the Vermont Yankee Nuclear Power Station, by the current owners to Entergy Nuclear Vermont Yankee, LLC. The first attempt was rightfully rejected in Docket 6300. The sale proposal as originally presented in this docket was considerably more favorable than that presented in Docket 6300. The offer in this docket included approximately $180 million up front and a favorable Power Purchase Agreement that included a low market adjuster that protected consumers if the market prices fell. However, there was room for improvement. The Department negotiated further terms with ENVY that were more favorable to rate payers. This negotiation resulted in a Memorandum of Understanding being entered into between the Vermont Owners, ENVY and the Department of Public Service. Among other things the MOU provided corporate guarantees by the parent company to ENVY, committed ENVY to future Board approvals for license renewal, mandated specific access to the plant and plant reports for the state's nuclear engineer, provided potential future power purchases for the State of Vermont; required that Entergy must seek approval from the Public Service Board before it can operate the plant beyond its existing license date of 2012; and provided for the sharing of excess revenues if license extension occurred and power costs exceeded a certain benchmarks. A key outcome of the settlement was agreement that Vermont utilities would be protected from higher than expected market prices. The Board approved the sale and the terms of the MOU on 6/13/02. The transfer of the Vermont Nuclear Power Station from the current owners took place on July 31, 2002.

Docket 6555 - Load Response Programs.

The DPS worked with all but one of Vermont's electric utilities (Rochester Electric Company chose not to participate) in the fall of 2001 and early 2002 to examine possible load response initiatives, including available technology and equipment, and to develop load response programs (LRP) that would, at a minimum, offer access to the ISO-NE LRP during hours of regional peak load to reduce demand. Some of the utilities developed pilot LRPs, such as those specifically to meet the needs of farms or to allow residential aggregation for community-wide participation in LRP. These LRPs were in place for the summer 2002 season and many continue for at least one year.

Docket 6596 - Citizens Utilities Company Rate Case

On October 31, 2001 Citizens filed a request to increase rates by 40% ($10.7 million). The largest single component of this request was for recovery of costs associated with the Hydro-Quebec/Vermont Joint Owners power contract. The PSB had previously found that both CVPS and GMP were imprudent in committing to the HQ contract. However, due to factors unique to Citizens, the Board found that Citizens was not imprudent. It also found (as it had previously) that the HQ contract was uneconomic, and disallowed $750,000 of HQ costs as a result. On other issues, the PSB found that five years after the Company was put on probation, there were still significant problems with its accounting practices. The Board found that: plant accounts were still over-stated; probation costs had not been properly tracked and allocated; the Vermont division had been charged for costs attributable to other Citizens divisions; and information supporting claimed costs was lacking. The Board indicated that it would consider these problems further when it reviewed probation compliance in Docket 5841/5859. Finally, the Board approved a DPS-sponsored service quality and reliability plan for Citizens.

Docket 6758 - Special Contracts Investigation.

In 2001, DPS initiated an investigation of the rate regulated utilities' compliance with Vermont law, which requires Board approval of all special contracts, rates and services not provided in the utilities' tariff. DPS found that fourteen utilities had unintentionally violated the law and negotiated settlements with each of them. On December 16, 2002 and January 15, 2003, the Board approved all of the settlements and the utilities paid total penalties of nearly $400,000 and committed to implementing improved regulatory compliance procedures Additional violations involving four of the fourteen utilities were discovered either just prior to entering into the final agreement on the initial settlements, in which case the resolution of those violations was reserved in the initial settlement, or were discovered shortly after the initial settlements were filed with the Board for approval. The DPS negotiated supplemental settlements with those four utilities to resolve the additional violations. On July 10, 2003, the Board approved DPS negotiated settlements of the additional violations and those four utilities paid a total of over $140,000 in additional penalties.

Docket 6777 - Reduction in Energy Efficiency Charge Amount to Be Collected in 2003

On December 20, 2002, the Board approved a request by DPS to reduce the amount to be collected by the Energy Efficiency Charge in 2003 from $16.1 million to $14 million. DPS contended that, during a time of intense economic pressure, it was in the best interest of the state to implement a more gradual phase-in of the budget to fund the EEU. The amount to be collected in 2003 had been set in an approved 1999 settlement under which the EEU budget gradually increased. In its approval of the reduction, the Board emphasized both the importance of the EEU and the fact that economic circumstances in 2003 were different from what was projected in 1999. Other budget years were not affected by the Department's request or the Board's approval.

C. Major Cases 2002-2004 Biennium

Docket 6555 Load Response

Following the process in 2001 and 2002 to develop load response initiatives for all Vermont's electric utilities (except Rochester Electric who chose not to participate), in 2003 DPS worked with those utilities to develop uniform programs to enable Vermont electric customers to participate in the ISO-NE load response offerings through their distribution utility. The ISO-NE program offerings provide payments to customers who reduce their electric load at critical times for the New England power grid and are expected to continue through February 2006. At present, all Vermont electric utilities (except Rochester) have at least one load response program available for their customers.

Home Energy Rating Systems Providers Accreditation Procedure ("HERS")

The Vermont Department of Public Service Accreditation Procedure for Home Energy Rating Systems Providers (Procedure) was approved and adopted by the DPS on May 22, 2003 with an effective date of July 1, 2003. Beginning July 1, 2003, each home energy rating organization must receive accreditation from the Vermont Department of Public Service before providing home energy rating services in Vermont. The purpose of this procedure is to ensure that accurate and consistent home energy ratings are performed by accredited HERS providers. It will promote an objective, cost-effective, and sustainable home energy rating process which can serve as compliance method for residential building energy codes, accurately gauge the performance of energy saving measures, and help Vermont's housing market reliably differentiate their products based on energy efficiency. The DPS Procedure sets minimum standards for rater training, operating procedures and policies, software programs, and quality control. These standards assure that customers can rely on the representations of accredited providers.

Residential Building Energy Standards ("RBES") Rulemaking

Following several years of development, in 2004, the Department of Labor and Industry, in coordination with DPS, adopted updates to the RBES effective January 1, 2005. The provisions of this code regulate the design of building envelopes for adequate thermal resistance and low air leakage and the design and selection of mechanical, ventilation, electrical, service water-heating and illumination systems and equipment which will enable effective use of energy in new residential building construction. It is intended that these provisions provide flexibility to permit the use of innovative approaches and techniques to achieve effective utilization of energy.

Dockets 6792 and 6825 - VELCO Northern Loop Project and Citizens Transfer of Transmission Assets to VELCO

In Docket 6792, on July 17, 2003 the Board issued a Certificate of Public good ("CPG") under 30 V.S.A. § 248 authorizing installation of a 115 kV circuit on an existing 48 kV line for 6.47 miles from VELCO's Irasburg substation to Mosher's Tap, upgrading of three existing VELCO substations in St. Johnsbury, Irasburg and Highgate, and other improvements and upgrades both to the VELCO system and to facilities that VELCO proposes to acquire from Citizens Energy Services. These substation upgrades and proposed 115 kV line allow VELCO to connect Citizens' 120 kV Derby to Highgate line to the VELCO 115 kV system, converting the radial transmission lines in northern Vermont to form a looped system and providing a significant and needed reliability improvement to the regional transmission grid. After a settlement among the petitioners, DPS and ANR, the Board approved the project with conditions, including agreed-upon design changes sought by the DPS to maximize the reliability benefit provided by the capital investment. In its approval, the Board stated concerns with a request made by VELCO to leave certain issues for review after a CPG is issued, but determined to allow the use of such procedures in this case for site-specific issues. Post-certification review of the project is ongoing. In the related Docket 6825, on August 18, 2003 the Board approved the sale of transmission assets to be used in the project from Citizens to VELCO.

Dockets 6797 through 6806 - Distributed Utility Planning Area-Specific Collaboratives

In January 2003, the Board opened ten dockets to house "area-specific collaboratives" ("ASCs") related to DUP. The ASCs resulted from a settlement approved in a prior docket on the principles of DUP (discussed elsewhere in this summary under "Docket 6290 - Distributed Utility Planning"). The importance of the ASC dockets is that they involve a collaborative effort among the relevant utility, the DPS, and in some cases affected entities to select the

appropriate alternative to address ten of the most constrained areas on the Vermont distribution system. Five of these areas are associated with GMP's system: the Digital Injection area in Williston, the White River Junction area, the so-called "Lamoille County Loop," the Mount Snow area, and the Tafts Corner distribution system in Williston. The other five ASCs are associated with CVPS's system: the subtransmission and distribution systems in Milton, CVPS's central area that serves Killington, CVPS's so-called "Southern Loop" from Bennington to Brattleboro, and the distribution circuits serving the Stratton area. Of the ASC dockets, three have been terminated after analysis demonstrated that DSM and generation would not meet the need in a timely and cost-effective manner: Digital Injection, White River Junction, and the Lamoille County Loop. The significance of this conclusion is that the utilities are likely to pursue transmission and distribution solutions. The remaining ASCs are ongoing.

Docket 6812-Uprate at Vermont Yankee Nuclear Power Station

In February 2003, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. petitioned the Vermont Public Service Board to make modifications to the Vermont Yankee Nuclear Power Station to increase the power output of the plant by up to 20%. Subsequently Entergy also petitioned the NRC for approval of its uprate. The proceeding before the Public Service Board was reviewed under the criteria set forth in Title 30 § 248. Those criteria look at such state issues as reliability, economic benefit to the state, aesthetics, and effect on the environment. Although the Department originally opposed the uprate because Entergy had not shown a sufficient economic benefit to the state and its residents as per the § 248 criteria, Entergy and the Department were able to come to agreement on the uprate after Entergy agreed that a portion of the proceeds from the sale of uprate power would go to certain state funds, and that two ratepayer protection plans would be put into place to protect ratepayers in the event of an uprate related outage. These agreements fulfilled the last unmet state criteria, and the Department and Entergy filed a Memorandum of Understanding with the Board. The estimated value of the revenue sharing portion of the MOU, based on the Department's market forecasts at that time, was over $10 million. The tax benefit was estimated at over $4 million. Under the ratepayer protection plans, Vermont ratepayers are protected from paying higher power costs in the event of an uprate related outage for up to $4.5 million. The Board approved the MOU and the uprate with certain conditions. Among other conditions, the Board approved the revenue sharing plan set forth in the MOU, but the money would not go to the named funds, but to the State's general fund. Additionally, the Board required a third tier of ratepayer protection to ensure ratepayers would be held harmless from incremental replacement power costs if Entergy had to reduce power or shutdown early because of the lack of spent fuel storage. The Board also retained jurisdiction to modify its Order if necessary based upon the results of an independent engineering inspection that was to be performed at the Vermont Yankee Nuclear Power Station. That inspection has been completed but the Board has not finished its review of the inspection report. Finally, the Department also had some safety concerns that it wanted answered prior to the uprate taking place. Safety issues are the exclusive purview of the U.S. Nuclear Regulatory Commission. To that end, the Department filed for and was granted party status in an NRC proceeding examining uprate (Docket NRC 50-271). That proceeding is now pending.

Docket 6839 - VELCO/GMP/VEC Digital Injection Project

On October 22, 2003, the Board issued a Certificate of Public Good ("CPG") under 30 V.S.A. § 248 for a new 115 kV/34.5 kV substation, a 34.5 kV switching station, and associated construction and improvement of transmission lines, all to be located in Williston and South Burlington. The project is an important reliability improvement to allow GMP and VEC to provide adequate service to the Chittenden County area, and the case commenced after an "area-specific collaborative" was conducted concerning the need for the project (discussed elsewhere in this summary under "Distributed Utility Planning Area-Specific Collaboratives – Dockets 6797 through 6806"). The project resulted from significant growth in electrical demand in the Chittenden County area, which is expected to continue. After a settlement among the petitioners, DPS, the Agency of Natural Resources, and the Town of Williston, the Board approved the project with conditions designed primarily to address the aesthetic impacts of the substation. Post-certification review of the substation's aesthetic impacts is ongoing.

Docket 6860 - VELCO Northwest Reliability Project ("NRP")

VELCO and GMP sought Board approval for a coordinated series of improvements to enhance the reliability of the VELCO transmission system in Vermont and the systems with which it interconnects. The principal features of the NRP, as originally filed on June 5, 2003, are a new 345 kV line from West Rutland to New Haven; a new 115 kV line from New Haven to VELCO's Queen City substation in South Burlington; reconductoring of the 115 kV Granite to Barre line; new PAR devices at VELCO's Sandbar (approved in Docket 6852), Blissville, and Granite substations; and new capacitor banks, breakers and other substation upgrades at VELCO's West Rutland, New Haven, Queen City, Essex, Williston, Hartford and Granite substations and GMP's Vergennes, North Ferrisburgh, Charlotte and Shelburne substations. On February 6, 2004, VELCO proposed certain alternative routes, design specifications and substation locations to the NRP, known as the Reroute Filing. The NRP proposed upgrades are designed to permit the system to reliably serve loads up to a 1,200 MW statewide load level. VELCO estimates the cost of the project to be approximately $128 million, of which approximately $12 million would be paid by Vermont, with the balance to be paid by other New England states through a cost-sharing formula. DPS believes the total project costs are likely to be approximately $149 million, with most of that cost subject to the cost-sharing formula. The Board held extensive hearings and numerous parties actively participated in the proceedings, including one regional planning commission, six municipalities and some individual landowners along the proposed NRP corridor, as well as organized groups including the Conservation Law Foundation, Vermont Citizens for Safe Energy, Associated Industries of Vermont and Vermont Chamber of Commerce. The issues that were most actively litigated included whether the project is needed, whether the NRP is the least-cost solution, aesthetic and public health issues, and in particular whether the transmission lines should be buried for aesthetic or health reasons. The DPS concluded that there is an urgent need for the NRP and that it presents the least-cost option that actually will meet the need in a timely manner. DPS consulted with Vermont Department of Health, which determined that the NRP will not impose an undue adverse affect on the public health from electric and magnetic fields. DPS also concluded that the NRP can be constructed without undue adverse impact on aesthetics and that burial of the transmission lines should be done only as a matter of last resort because of its high cost. Briefing was completed on December 30, 2004 and a Board issued an order approving the proposal at the end of January 2005. Significant post-certification proceedings are required to address specific design and aesthetic mitigation issues.

Dockets 6866 and 6867- Rate Settlements with GMP and CVPS

The Vermont Department of Public Service entered into agreements with the state's two largest utilities that were designed to hold rates steady until January 1, 2005, and provided a cap on GMP rate increases for two additional years through 2006. The settlements also reduced and capped the utilities' allowed rate of return on equity and provided a mechanism to automatically return any over-earnings to the benefit of customers. The plans provided Vermont consumers with protection from the volatility of today's electric wholesale markets by an agreement that the companies would not seek increases in current electric rates for at least an 18 month period. This stability is positive for all consumers, protecting residential ratepayers from unexpected household expenses, and allowing businesses to predict their medium-term costs of power. The review of CVPS and GMP was prompted by the sale of the Vermont Yankee nuclear power plant. The objective was to assure that any possible benefits from the sale would flow to Vermont ratepayers. By reaching a negotiated settlement of these two cases, the DPS was able to achieve a number of goals that likely could not be achieved through litigation. The rate provisions and earnings caps are not outcomes that can be imposed on utilities, so achieving these results through negotiation, along with the other benefits included in the agreements, offered substantial benefit to the people of the state.

Highlights of the GMP plan (Docket 6867) include:

$ Rate stability: GMP cannot seek an increase in rates until January 1, 2005, and will increase rates by 1.9% on January 1, 2005, and .9% on January 1, 2006. GMP's last increase was 3.42% on January 1, 2001. Before each of the planned increases may go into effect, GMP must make cost of service filings with the DPS and the Public Service Board that support the rate increase.

$ Reduction in allowed earnings: A reduction in GMP's allowed return on equity from its current 11.25% to 10.5%. Any over-earnings during 2003 and 2004 would be applied to reduce GMP=s future expenses to the benefit of ratepayers. In addition, any earnings over the allowed rate of return would be refunded to consumers in the form of bill credits in 2005 and 2006.

Highlights of the CVPS plan (Docket 6866) include:

$ Rate stability: CVPS will not seek an increase in rates before January 1, 2005. CVPS's last increase was 3.95% on July 1, 2001.

$ Reduction in allowed earnings: A reduction in CVPS's allowed return on equity from its current 11% to 10.5%. Any over-earnings during 2003 and 2004 would be applied to reduce CVPS=s future expenses to the benefit of ratepayers.

The agreements provided that in case of extraordinary costs due to a devastating storm or other unusual calamities that the utilities will have the opportunity to seek rate recovery for these costs. Both utilities agreed to negotiate alternative regulation plans under a new law passed last legislative session. The utilities also will file fully allocated cost-of-service analyses and rate redesigns, which are a necessary foundation for alternative regulation, and will determine whether costs are properly allocated among classes of customer.
In the case of GMP, Docket 6867, the Board approved the agreement with the DPS with certain conditions.
In the case of CVPS, Docket 6866, the Board also approved the agreement with the following conditions:

- a requirement that the allowed return on equity be reduced from 10.5% (as agreed to in the Memorandum of Understanding) to 10.25%;
- a requirement that Central Vermont file a proposal for the accounting treatment of the estimated $21 million that it will receive from Public Service Company of New Hampshire from the sale of Connecticut Valley Electric Company ("CVEC"); and
- a requirement that Central Vermont address the increases in the balances in certain deferral accounts.

CVPS found the conditions unacceptable and rejected the agreement pursuant to its terms. As a result, on March 26, 2004, the DPS petitioned for a rate investigation into CVPS rates. On April 7, 2004, the Board opened the requested investigation. Shortly thereafter CVPS filed for a rate increase. The investigation and rate increase request were consolidated and are still pending.

Dockets 6825, 6850/6853 & 6917 - Citizens Utilities Company (now Citizens Communications Company).

In 2003, with DPS and PSB review of its probation pending, see summary of Dockets 5841/5859 elsewhere in this section, Citizens finalized agreements to divest its Vermont operations and cease operating in Vermont. Citizens ultimately transferred the bulk of its transmission assets to VELCO pursuant to a stipulation with the DPS approved in Docket 6825, and its in-state generation assets to Great Bay Hydro Corporation pursuant to a stipulation approved in Docket 6917.

On April 1, 2004 Citizens closed the sale of its Vermont retail electric operations and remaining assets to the Vermont Electric Cooperative, Inc. (VEC), again pursuant to a stipulation with the DPS approved in Dockets 6850/6853. As part of its stipulation with the DPS, Citizens agreed to refund over $720,000 to its Vermont ratepayers, pay $250,000 to the State to settle probation-related issues, and pay $2.9 million back to VEC to defray certain operating and maintenance costs and to make reliability improvements. As part of a companion stipulation with the DPS, VEC agreed to lower the rates for its existing customers by September 2005, refrain from seeking a rate increase for five years, and take a series of other actions designed to improve its efficiency, reliability and customer service.

Dockets 6875 and 6925 - Landfill Gas Generation

In 2004 the PSB approved construction of two landfill-gas-fired electric generating stations; the DPS supported both projects. In Docket 6875 Gas-Watt Energy, LLC (an independent power producer) proposed to build a 90-kilowatt generator at the Chittenden Solid Waste District Landfill in Williston, with the output sold to Green Mountain Power Corp. This project was approved in April 2004. In Docket 6925 the Washington Electric Cooperative (WEC) proposed and received approval to construct a 4.8 megawatt generator at the Casella landfill in Coventry, with associated transmission improvements. A permit was issued in June of 2004. This project is expected to fill a substantial portion of WEC's long-term baseload energy needs at a reasonable and stable cost. Both of these projects are making use of a resource - landfill gas - that is currently being burned off as waste.

Docket 6911 - East Haven Wind Farm

This Docket is an investigation into a request for a CPG by East Mountain Development Corporation, LLC d/b/a East Haven Windfarm to construct a four turbine commercial wind generating station at the summit of East Mountain in East Haven. The project has stirred great interest and some controversy as numerous groups and individuals have expressed strong opinions on both sides of the issue. Currently, all parties have filed direct testimony and hearings are anticipated in March of 2005 following the filing of rebuttal testimony by the petitioner. The Department has filed testimony on a number of criteria under 30 V.S.A. § 248 expressing preliminary conditional support for the project subject to review of testimony and evidence submitted by other parties. The outcome of the Docket will be significant as it is the first proposal for a larger scale commercial wind generation facility in Vermont since the Searsburg project was approved in 1996.

Dockets No. 6933 and 6977 - Central Vermont Public Service Green Tariff and Blue Spruce Farm Methane Facility

These dockets are companion cases. In March, 2004, CVPS filed a Voluntary Renewable Service Tariff Rider (which it refers to as "Cow Power") for approval with the Public Service Board. This was the first voluntary renewable tariff filed under the new statutory provision (30 V.S.A. § 8003) approved by the legislature in 2003. The Voluntary Renewable Tariff proposed that CVPS customers be allowed to voluntarily purchase power with certain environmental attributes, (Renewable Energy Certificates) from qualifying renewable energy source, including from participating farm-producers located within the Company's service area. Although the originally filed tariff did not meet all of the Department's concerns, the Department and CVPS were able to work through all of the Department's concerns and present an agreed upon revised tariff to the Board. The revised tariff allowed for a CVPS customer to purchase 25%, 50%, or 100% of its service subject to the rider at 4 cents per kWh. The funds paid by CVPS customers will be used to acquire RECs for farm-produced generation in CVPS territory, RECs associated with qualifying renewable energy, or it will be deposited in the CVPS Renewable Development Fund. The Board approved the revised tariff. In June, 2004, Blue Spruce Farm, Inc. petitioned the Board for a certificate of Public Good pursuant to 30 V.S.A. § 248 for authorization to construct a methane-fueled electrical generating

facility in Bridport Vermont. The facility if approved would provide RECs for customers who signed up for CVPS's Voluntary Renewable Service Tariff Rider. The project was to install a 275 kW electric generator to be fueled by methane collected from the anaerobic digestion of cow manure. Once the concerns of the Department and other parties were addressed, the parties reached a settlement. That s ettlement and the project was approved by the Board subject to some conditions. The project is close to being placed in service.

D. Rates

New Rates. The period 2000-2004 saw 11 requests for rate relief and four filings for major rate cost allocation and design changes. The customers of Enosburg Falls saw two rate cases during the biennium period the first request was for 13.35% and the second was for 5.37%. Six other electric utilities filed for rate change once during the biennium. The following rate increase requests were filed during the period, Central Vermont Public Service 7.6%, Hyde Park 9.98%, Orleans 6.62%, Stowe 12.25%, Ludlow 10.86%, Citizens Comm. Co. 40.02%, Burlington Electric Department 7.19%, Jacksonville Electric Company 24.97%, and Morrisville Water & Light Department 11.33%.

Rate Design. Four utilities filed for rate design changes; Barton, Enosburg Falls, Orleans Electric and Ludlow Electric.

Residential Rates. Tables 2.1A and 2.3A give an overview of a residential rates, and typical bills are shown in Table 2-2. For each of Vermont's electric utilities, Table 2.1A shows the average residential customer's use and revenue per kWh for 2000 and 2001 (Revenue per kWh is a the amount the utility collected per kWh sold to its customers either overall or for a given customer class). As shown in Table 2.1A, the 2000 average residential rate was approximately 12.31 cents/kWh. In 2001, it was approximately 12.51 cents/kWh, a 1.60% increase over 2000. For the period 2002-2003 the average rate increased to 12.87 cents/kWh (Table 2.2A). Theses tables also provide rankings of the Vermont utilities, identifying the company whose residential revenue per kWh is the lowest and how the other 21 utilities compare.

Table 2.2 shows detailed rate information and typical residential bills as of December, 1999 for each of the Vermont electric utilities. Billing components are shown, including customer charge and rates for peak months and off-peak months. Typical residential bill amounts are shown for a range of usage; from 25 kWh to 3,000 kWh. Table 2.6 shows detailed rate information and typical residential bills as of November 2004

Commercial and Industrial Rates. Tables 2.1B and 2.3B give an overview of commercial and industrial customer counts, revenue, and kWh usage for each utility in 2000, 2001, 2002 and 2003. Revenue per kWh is shown to indicate what the utility collected per kWh sold. As shown in Table 2.1B, for 2000 and 2001, the average revenue/kWh for the commercial class was approximately 10.63 cents/kWh and 10.98 cents/kWh and as shown in Table 2.3B, for 2002 and 2003, the average revenue/kWh for the commercial class was approximately 11.21 cents/kWh and 11.26 cents/kWh.

Table 2.1C shows the same values for industrial rates, which were 7.32 cents/kWh in 2000 and 7.79 cents/kWh in 1999. Similarly Table 2.3C presents the values for 2002 at 7.86 cents/kWh and for 2003 the average industrial rate was 8.01 cents/kWh. These tables also show a ranking of each utility's commercial and industrial revenue per kWh.

Aggregate Data. Tables 2.1D and 2.3D provide an overview of Vermont's electric utilities' aggregate revenue, kWh sales, customer counts, and revenue per kWh. Using revenue per kWh as an indicator of price, this table also shows each utility 's rank among Vermont electric utilities. The Vermont utilities ' average revenue/kWh for 2000 was 10.29 cents; in 2001 it was 10.64 cents. For 2002 and 2003 the average revenue/kWh were 10.89cents and 11.00 cents respectively.

Table 2-1A
Vermont Electric Utilities: Revenue and Usage Residential, 2000 -2001

2001

Company	Residential Rev	kWh	Residential Customers	Avg Res Use (kWh)	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,316,123	10,312,382	1,830	5,635	12.76	18
BED	$8,503,467	89,786,000	15,883	5,653	9.47	7
Citizens	$12,522,456	110,925,000	18,351	6,045	11.29	12
CVPS	$116,719,571	897,220,000	124,935	7,181	13.01	19
Enosburg	$1,325,729	11,691,208	1,341	8,718	11.34	13
GMP	$70,025,393	549,151,000	73,249	7,497	12.75	17
Hardwick	$2,693,196	21,849,284	3,602	6,066	12.33	15
Hyde Park	$748,352	7,763,436	1,047	7,415	9.64	8
Jacksonville	$362,270	3,302,914	575	5,744	10.97	11
Johnson	$406,171	5,443,399	692	7,866	7.46	1
Ludlow	$1,334,358	15,613,759	2,864	5,452	8.55	5
Lyndonville	$2,663,605	31,303,000	4,391	7,129	8.51	4
Morrisville	$2,069,853	19,129,000	2,999	6,378	10.82	10
Northfield	$1,317,021	10,563,776	1,628	6,489	12.47	16
Orleans	$386,782	4,130,028	615	6,715	9.37	6
Readsboro	$140,114	1,648,678	264	6,245	8.50	3
Rochester	$622,569	4,237,974	692	6,124	14.69	21
Stowe	$2,143,603	18,517,290	2,784	6,651	11.58	14
Swanton	$2,277,464	23,377,234	2,887	8,097	9.74	9
VEC	$14,805,731	113,533,000	15,192	7,473	13.04	20
VMPD OMYA	$481,267	5,810,508	810	7,173	8.28	2
WEC	$8,497,764	53,970,000	9,104	5,928	15.75	22
Total	$251,362,859	2,009,278,870	285,735	7,032	12.51	

2000

Company	Residential Rev	kWh	Residential Customers	Avg Res Use (kWh)	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,303,804	10,408,024	1,841	5,653	12.53	19
BED	$8,507,769	90,024,000	15,843	5,682	9.45	8
Citizens	$116,327,240	908,782,000	124,078	7,324	12.80	20
CVPS	$12,480,692	113,249,000	18,271	6,198	11.02	11
Enosburg	$1,296,196	11,491,837	1,332	8,628	11.28	13
GMP	$69,832,087	558,682,000	72,400	7,717	12.50	17
Hardwick	$2,718,841	21,729,775	3,573	6,082	12.51	18
Hyde Park	$684,773	7,828,808	1,032	7,586	8.75	5
Jacksonville	$373,415	3,333,214	575	5,797	11.20	12
Johnson	$411,937	5,469,262	692	7,904	7.53	1
Ludlow	$1,323,318	15,900,348	2,863	5,554	8.32	3
Lyndonville	$2,785,755	31,410,000	4,484	7,005	8.87	6
Morrisville	$2,136,065	18,872,000	2,971	6,352	11.32	14
Northfield	$1,307,935	10,624,494	1,622	6,550	12.31	16
Orleans	$376,370	4,236,236	607	6,979	8.88	7
Readsboro	$141,809	1,657,027	261	6,349	8.56	4
Rochester	$561,298	4,571,701	686	6,664	12.28	15
Stowe	$2,088,452	19,447,700	2,743	7,090	10.74	10
Swanton	$2,289,356	23,269,561	2,870	8,108	9.84	9
VEC	$14,521,219	113,228,000	14,975	7,561	12.82	21
VMPD OMYA	$481,057	5,794,998	810	7,154	8.30	2
WEC	$8,575,425	54,705,000	8,968	6,100	15.68	22
Total	$250,524,813	2,034,714,985	283,497	7,177	12.31	

Source: Annual Reports

Table 2-1B

Vermont Electric Utilities: Revenue and Usage, Commercial, 2000 - 2001

2001

Company	Commercial Revenue	kWh	Commercial Customers Avg	Com Use (kWh)	Com Rev/kWh (cents)	Rank by Rev/kWh
Barton	$444,044	3,075,064	168	18,304	14.44	20
BED	$17,925,411	176,117,000	3,576	49,250	10.18	6
Citizens	$6,381,784	70,383,000	1,951	36,075	9.07	3
CVPS	$100,809,901	853,242,000	19,069	44,745	11.81	17
Enosburg	$767,184	7,261,816	126	57,633	10.56	8
GMP	$74,496,056	718,969,000	12,984	55,373	10.36	7
Hardwick	$483,679	4,523,423	346	13,073	10.69	9
Hyde Park	$137,192	1,199,782	111	10,809	11.43	14
Jacksonville	$74,959	673,992	52	12,961	11.12	12
Johnson	$105,569	1,358,717	98	13,864	7.77	1
Ludlow	$1,152,376	12,481,604	605	20,631	9.23	4
Lyndonville	$1,044,450	8,852,000	638	13,875	11.80	16
Morrisville	$830,551	7,405,000	455	16,275	11.22	13
Northfield	$331,777	2,728,846	178	15,331	12.16	18
Orleans	$152,132	1,536,186	64	24,003	9.90	5
Readsboro	$60,594	524,593	51	10,286	11.55	15
Rochester	$198,572	1,355,233	111	12,209	14.65	21
Stowe	$3,192,671	29,626,237	586	50,557	10.78	10
Swanton	$445,969	4,065,240	265	15,341	10.97	11
VEC	$1,047,452	7,994,000	574	13,927	13.10	19
VMPD OMYA	$372,331	4,376,081	69	63,421	8.51	2
WEC	$509,738	3,098,000	226	13,708	16.45	22
Total	$210,964,392	1,920,846,814	42,303	45,407	10.98	

2000

Company	Commercial Revenue	kWh	Commercial Customers Avg	Com Use (kWh)	Com Rev/kWh (cents)	Rank by Rev/kWh
Barton	$423,633	2,980,792	181	16,468	14.21	21
BED	$17,619,021	172,887,000	3,590	48,158	10.19	9
Citizens	$96,469,704	851,165,000	18,316	46,471	11.33	15
CVPS	$6,538,380	70,788,000	1,949	36,320	9.24	3
Enosburg	$675,454	6,450,448	123	52,443	10.47	11
GMP	$70,382,431	704,126,000	12,742	55,260	10.00	7
Hardwick	$449,262	4,606,004	334	13,790	9.75	6
Hyde Park	$123,287	1,198,476	91	13,170	10.29	10
Jacksonville	$70,506	634,829	51	12,448	11.11	13
Johnson	$108,202	1,382,440	98	14,107	7.83	1
Ludlow	$1,094,067	11,627,528	585	19,876	9.41	5
Lyndonville	$1,035,309	8,921,000	602	14,819	11.61	17
Morrisville	$827,613	7,364,000	419	17,575	11.24	14
Northfield	$340,749	2,767,906	182	15,208	12.31	18
Orleans	$152,216	1,630,188	62	26,293	9.34	4
Readsboro	$48,666	429,030	48	8,938	11.34	16
Rochester	$173,270	1,374,511	111	12,383	12.61	19
Stowe	$3,029,056	29,998,920	569	52,722	10.10	8
Swanton	$434,377	3,915,082	259	15,116	11.09	12
VEC	$1,181,726	9,137,000	547	16,704	12.93	20
VMPD OMYA	$373,815	4,434,908	62	71,531	8.43	2
WEC	$489,508	3,004,000	215	13,972	16.30	22
Total	$202,040,252	1,900,823,062	41,136	46,208	10.63	

Source: Annual Reports

Table 2-1C

Vermont Electric Utilities: Revenue and Usage, Industrial, 2000 - 2001

2001

Company	Industrial Revenue	kWh	Industrial Customers	Avg Ind Use (kWh)	Ind Rev/kWh (cents)	Rank by Rev/kWh
Barton	$0	0	0	0	0.00	0
BED	$5,492,450	63,889,000	14	4,563,500	8.60	7
Citizens	$7,741,955	114,352,000	9	12,705,778	6.77	3
CVPS	$33,475,365	405,099,000	38	10,660,500	8.26	6
Enosburg	$0	0	0	0	0.00	0
GMP	$50,276,089	683,004,000	22	31,045,636	7.36	4
Hardwick	$386,239	3,773,557	23	164,068	10.24	10
Hyde Park	$107,877	976,557	2	488,279	11.05	16
Jacksonville	$149,945	1,458,810	4	364,703	10.28	12
Johnson	$651,894	8,320,282	14	594,306	7.83	5
Ludlow	$1,650,258	15,650,066	5	3,130,013	10.54	14
Lyndonville	$2,195,618	18,955,000	37	512,297	11.58	17
Morrisville	$1,682,361	16,339,000	47	347,638	10.30	13
Northfield	$1,160,732	10,545,525	15	703,035	11.01	15
Orleans	$1,127,941	10,987,200	1	10,987,200	10.27	11
Readsboro	$0	0	0	0	0.00	1
Rochester	$0	0	0	0	0.00	0
Stowe	$860,297	5,336,369	16	333,523	16.12	19
Swanton	$3,054,758	31,337,065	77	406,975	9.75	9
VEC	$1,830,926	19,224,000	77	249,662	9.52	8
VMPD OMYA	$13,356,333	199,417,948	2	99,708,974	6.70	2
WEC	$418,035	3,085,000	10	308,500	13.55	18
Total	$125,619,073	1,611,750,379	413	3,902,543	7.79	

2000

Company	Industrial Revenue	kWh	Industrial Customers	Avg Ind Use (kWh)	Ind Rev/kWh (cents)	Rank by Rev/kWh
Barton	$0	0	0	0	0.00	0
BED	$6,024,072	72,761,000	13	5,597,000	8.28	6
Citizens	$35,819,827	434,126,000	42	10,336,333	8.25	5
CVPS	$7,343,939	109,892,000	9	12,210,222	6.68	3
Enosburg	$0	0	0	0	0.00	0
GMP	$44,487,958	683,297,000	23	29,708,565	6.51	2
Hardwick	$382,335	4,018,724	23	174,727	9.51	10
Hyde Park	$91,035	895,400	3	298,467	10.17	15
Jacksonville	$147,275	1,406,360	4	351,590	10.47	16
Johnson	$710,576	9,112,954	13	700,996	7.80	4
Ludlow	$1,526,099	16,326,000	5	3,265,200	9.35	9
Lyndonville	$2,110,074	19,620,000	38	516,316	10.75	17
Morrisville	$1,753,341	17,532,000	50	350,640	10.00	14
Northfield	$1,129,657	10,501,168	14	750,083	10.76	18
Orleans	$1,044,354	10,944,000	1	10,944,000	9.54	11
Readsboro	$7,825	79,680	1	79,680	9.82	13
Rochester	$0	0	0	0	0.00	0
Stowe	$639,966	7,156,016	15	477,068	8.94	7
Swanton	$3,062,558	31,481,998	75	419,760	9.73	12
VEC	$1,609,685	17,669,000	56	315,518	9.11	8
VMPD OMYA	$12,580,812	202,195,200	2	101,097,600	6.22	1
WEC	$423,004	3,148,000	10	314,800	13.44	19
Total	$120,894,392	1,652,162,500	397	4,161,618	7.32	

Source: Annual Reports

Table 2-1D

Vermont Electric Utilities: Revenue and Usage, Total, 2000 - 2001

2001

Company	Total Rate Revenue	kWh	Total Customers	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,904,684	14,260,937	2,029	13.36	20
BED	$32,214,333	332,802,000	19,474	9.68	6
Citizens	$27,546,606	305,446,000	20,732	9.02	3
CVPS	$252,601,471	2,161,059,000	144,216	11.69	16
Enosburg	$2,270,996	20,447,962	1,512	11.11	14
GMP	$195,966,002	1,956,147,000	86,310	10.02	9
Hardwick	$3,597,882	30,339,712	3,979	11.86	17
Hyde Park	$1,067,064	10,536,813	1,194	10.13	11
Jacksonville	$595,014	5,558,716	631	10.70	13
Johnson	$1,194,794	15,499,124	834	7.71	2
Ludlow	$4,157,845	44,086,969	3,481	9.43	5
Lyndonville	$6,615,696	66,019,000	5,066	10.02	10
Morrisville	$4,603,784	43,029,000	3,502	10.70	12
Northfield	$3,060,607	25,734,934	2,252	11.89	18
Orleans	$1,728,768	17,289,176	698	10.00	8
Readsboro	$205,806	2,254,751	412	9.13	4
Rochester	$877,459	5,932,092	814	14.79	21
Stowe	$6,516,968	56,422,495	3,418	11.55	15
Swanton	$5,842,882	59,099,127	3,232	9.89	7
VEC	$17,769,940	141,229,000	15,891	12.58	19
VMPD OMYA	$14,236,670	209,702,937	889	6.79	1
WEC	$9,427,277	60,161,000	9,342	15.67	22
Total	$594,002,548	5,583,057,745	329,908	10.64	

2001

Company	Total Rate Revenue	kWh	Total Customers	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,869,112	14,260,872	2,058	13.11	21
BED	$32,439,099	338,628,000	19,447	9.58	9
Citizens	$27,216,876	303,351,000	20,601	8.97	4
CVPS	$250,212,844	2,199,561,000	142,606	11.38	16
Enosburg	$2,143,847	19,424,520	1,500	11.04	15
GMP	$185,819,544	1,951,065,000	85,220	9.52	8
Hardwick	$3,583,323	30,548,114	3,938	11.73	17
Hyde Park	$966,167	10,521,451	1,151	9.18	6
Jacksonville	$599,037	5,497,403	630	10.90	14
Johnson	$1,261,934	16,340,257	834	7.72	2
Ludlow	$3,963,528	44,189,763	3,460	8.97	3
Lyndonville	$6,629,149	66,768,000	5,124	9.93	10
Morrisville	$4,737,073	43,923,000	3,441	10.78	13
Northfield	$3,025,290	25,782,474	2,249	11.73	18
Orleans	$1,635,857	17,473,406	688	9.36	7
Readsboro	$203,264	2,247,217	407	9.05	5
Rochester	$785,868	6,280,165	808	12.51	20
Stowe	$6,005,390	59,331,584	3,359	10.12	12
Swanton	$5,857,635	58,987,567	3,207	9.93	11
VEC	$17,414,454	140,636,000	15,637	12.38	19
VMPD OMYA	$13,462,423	212,523,506	881	6.33	1
WEC	$9,489,677	60,865,000	9,195	15.59	22
Total	$579,321,391	5,628,205,299	326,441	10.29	

Source: Company Annual Reports

Note: Total revenues and sales include additional revenue and sales not included in the 3 major classes.

Table 2-2

TYPICAL RESIDENTIAL BILLS AS OF NOVEMBER 2002

UTILITY:	BILLING ELEMENTS		KWh 25	KWh 100	KWh 250	KWh 500	KWh 750	KWh 1000	KWh 2000	KWh 3000
BARTON										
Customer Charge		$7.95	$95.40	$95.40	$95.40	$95.40	$95.40	$95.40	$95.40	$95.40
NYPA Block	100	$0.08	$24.77	$99.08	$99.08	$99.08	$99.08	$99.08	$99.08	$99.08
Levelized rate	12	$0.11	$0.00	$0.00	$203.47	$542.59	$881.71	$1,220.83	$2,577.31	$3,933.79
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.226%	$2.72	$4.40	$9.01	$16.68	$24.35	$32.03	$62.73	$93.42
Average Monthly Bill			$10.24	$16.57	$33.91	$62.81	$91.71	$120.61	$236.21	$351.81
BURLINGTON										
Customer Charge		$7.33	$87.96	$87.96	$87.96	$87.96	$87.96	$87.96	$87.96	$87.96
NYPA Block	200	0.05546	$16.64	$66.55	$133.11	$133.11	$133.11	$133.11	$133.11	$133.11
Peak Months	4	0.09825		$0.00	$19.65	$117.89	$216.14	$314.38	$707.36	$1,100.34
Off Peak Months	8	0.09462		$0.00	$37.85	$227.10	$416.35	$605.59	$1,362.59	$2,119.58
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Average Monthly Bill			$8.72	$12.88	$23.21	$47.17	$71.13	$95.09	$190.92	$286.75
CITIZENS										
Customer Charge		$7.66	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92
First Block(off-Peak)	250	$0.11	$16.61	$66.45	$166.13	$166.13	$166.13	$166.13	$166.13	$166.13
First Block (peak)	250	0.11086	$16.63	$66.52	$166.29	$166.29	$166.29	$166.29	$166.29	$166.29
Peak Months	6	$0.13		$0.00	$0.00	$191.88	$383.76	$575.64	$1,343.16	$2,110.68
Off Peak Months	6	$0.11		$0.00	$0.00	$166.46	$332.91	$499.37	$1,165.19	$1,831.01
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.290%	$3.63	$6.53	$12.31	$22.71	$33.11	$43.51	$85.11	$126.70
Average Monthly Bill			$10.73	$19.28	$36.39	$67.12	$97.84	$128.57	$251.48	$374.39
CVPS										
Customer Charge		$11.38	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56
Levelized rate	12	$0.12	$35.24	$140.95	$352.38	$704.76	$1,057.14	$1,409.52	$2,819.04	$4,228.56
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.210%	$3.60	$5.81	$10.24	$17.63	$25.01	$32.39	$61.92	$91.45
Average Monthly Bill			$14.62	$23.61	$41.60	$71.58	$101.56	$131.54	$251.46	$371.38
ENOSBURG										
Customer Charge		$7.60	$91.20	$91.20	$91.20	$91.20	$91.20	$91.20	$91.20	$91.20
NYPA Block	175	$0.05	$15.16	$60.62	$106.09	$106.09	$106.09	$106.09	$106.09	$106.09
Peak Months	5	$0.19		$0.00	$70.87	$307.09	$543.32	$779.54	$1,724.44	$2,669.34
Off Peak Months	7	$0.11		$0.00	$57.51	$249.20	$440.90	$632.59	$1,399.37	$2,166.15
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.185%	$1.97	$2.81	$6.02	$13.93	$21.85	$29.76	$61.41	$93.06
Average Monthly Bill			$9.03	$12.89	$27.64	$63.96	$100.28	$136.60	$281.88	$427.15

UTILITY:	BILLING ELEMENTS		KWh 25	KWh 100	KWh 250	KWh 500	KWh 750	KWh 1000	KWh 2000	KWh 3000
GMP										
Customer Charge		$11.27	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24
Levelized rate	12	$0.11	$33.44	$133.75	$334.38	$668.76	$1,003.14	$1,337.52	$2,675.04	$4,012.56
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.208%	$3.50	$5.59	$9.76	$16.70	$23.65	$30.60	$58.39	$86.18
Average Monthly Bill			$14.35	$22.88	$39.95	$68.39	$96.84	$125.28	$239.06	$352.83
HARDWICK										
Customer Charge		$6.05	$72.60	$72.60	$72.60	$72.60	$72.60	$72.60	$72.60	$72.60
NYPA Block	100	$0.04	$12.45	$49.80	$49.80	$49.80	$49.80	$49.80	$49.80	$49.80
Levelized rate	12	$0.13	$0.00	$0.00	$226.84	$604.90	$982.96	$1,361.02	$2,873.26	$4,385.50
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.240%	$2.04	$2.94	$8.40	$17.48	$26.57	$35.66	$72.02	$108.37
Average Monthly Bill			$7.26	$10.45	$29.80	$62.07	$94.33	$126.59	$255.64	$384.69
HYDE PARK										
Customer Charge		$7.97	$95.64	$95.64	$95.64	$95.64	$95.64	$95.64	$95.64	$95.64
NYPA Block	100	$0.05	$15.49	$61.96	$61.96	$61.96	$61.96	$61.96	$61.96	$61.96
Levelized rate	12	$0.09		$0.00	$166.46	$443.90	$721.34	$998.78	$2,108.54	$3,218.30
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.276%	$3.06	$4.34	$8.93	$16.58	$24.23	$31.88	$62.48	$93.07
Average Monthly Bill			$9.52	$13.50	$27.75	$51.51	$75.26	$99.02	$194.05	$289.08
JACKSONVILLE										
Customer Charge		$5.15	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80
NYPA Block	175	$0.05	$14.97	$59.88	$104.79	$104.79	$104.79	$104.79	$104.79	$104.79
Peak Months	5	$0.13		$0.00	$50.51	$218.89	$387.26	$555.64	$1,229.14	$1,902.64
Off Peak Months	7	$0.11		$0.00	$55.86	$242.06	$428.26	$614.46	$1,359.26	$2,104.06
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.208%	$2.15	$3.41	$7.65	$17.60	$27.54	$37.48	$77.25	$117.02
Average Monthly Bill			$6.58	$10.42	$23.38	$53.76	$84.14	$114.51	$236.02	$357.53
JOHNSON										
Customer Charge		$5.29	$63.48	$63.48	$63.48	$63.48	$63.48	$63.48	$63.48	$63.48
NYPA Block	100	$0.05	$13.74	$54.96	$54.96	$54.96	$54.96	$54.96	$54.96	$54.96
Peak Months	4	$0.09		$0.00	$52.86	$140.96	$229.06	$317.16	$669.56	$1,021.96
Off Peak Months	8	$0.06		$0.00	$70.44	$187.84	$305.24	$422.64	$892.24	$1,361.84
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.394%	$3.04	$4.66	$9.52	$17.61	$25.70	$33.80	$66.17	$98.54
Average Monthly Bill			$6.69	$10.26	$20.94	$38.74	$56.54	$74.34	$145.53	$216.73

UTILITY:	BILLING ELEMENTS		KWh 25	KWh 100	KWh 250	KWh 500	KWh 750	KWh 1000	KWh 2000	KWh 3000
LUDLOW										
Customer Charge		$5.56	$66.72	$66.72	$66.72	$66.72	$66.72	$66.72	$66.72	$66.72
NYPA Block	150	$0.03	$9.01	$36.05	$54.07	$54.07	$54.07	$54.07	$54.07	$54.07
Peak Months	6	$0.10		$0.00	$61.52	$215.33	$369.14	$522.95	$1,138.19	$1,753.43
Off Peak Months	6	$0.05		$0.00	$32.59	$114.07	$195.55	$277.03	$602.95	$928.87
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.300%	$2.27	$3.08	$6.45	$13.51	$20.56	$27.62	$55.86	$84.09
Average Monthly Bill			$6.50	$8.82	$18.45	$38.64	$58.84	$79.03	$159.82	$240.60
LYNDONVILLE										
Customer Charge		$6.10	$73.20	$73.20	$73.20	$73.20	$73.20	$73.20	$73.20	$73.20
NYPA Block	100	$0.05	$14.63	$58.50	$58.50	$58.50	$58.50	$58.50	$58.50	$58.50
Levelized rate	12	$0.09		$0.00	$156.22	$416.59	$676.96	$937.33	$1,978.81	$3,020.29
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.307%	$2.70	$4.05	$8.84	$16.84	$24.84	$32.84	$64.83	$96.83
Average Monthly Bill			$7.54	$11.31	$24.73	$47.09	$69.46	$91.82	$181.28	$270.74
MORRISVILLE										
Customer Charge		$5.04	$60.48	$60.48	$60.48	$60.48	$60.48	$60.48	$60.48	$60.48
NYPA Block	150	$0.05	$13.54	$54.16	$81.23	$81.23	$81.23	$81.23	$81.23	$81.23
Peak Months	5	$0.13		$0.00	$67.37	$235.78	$404.19	$572.60	$1,246.25	$1,919.90
Off Peak Months	7	$0.11		$0.00	$74.49	$260.70	$446.92	$633.14	$1,378.01	$2,122.88
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.262%	$1.94	$3.00	$7.43	$16.71	$26.00	$35.29	$72.44	$109.59
Average Monthly Bill			$6.33	$9.80	$24.25	$54.58	$84.90	$115.23	$236.53	$357.84
NORTHFIELD										
Customer Charge		$10.23	$122.76	$122.76	$122.76	$122.76	$122.76	$122.76	$122.76	$122.76
NYPA Block	120	$0.05	$13.98	$55.91	$67.09	$67.09	$67.09	$67.09	$67.09	$67.09
Levelized rate	12	$0.12		$0.00	$190.20	$555.96	$921.72	$1,287.48	$2,750.52	$4,213.56
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.237%	$3.24	$4.24	$9.01	$17.69	$26.37	$35.04	$69.75	$104.45
Average Monthly Bill			$11.67	$15.24	$32.42	$63.62	$94.83	$126.03	$250.84	$375.65
ORLEANS										
Customer Charge		$6.48	$77.76	$77.76	$77.76	$77.76	$77.76	$77.76	$77.76	$77.76
NYPA Block	170	$0.07	$19.51	$78.02	$132.64	$132.64	$132.64	$132.64	$132.64	$132.64
Levelized rate	12	$0.09		$0.00	$87.15	$359.49	$631.83	$904.17	$1,993.53	$3,082.89
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.258%	$2.51	$4.02	$7.67	$14.70	$21.72	$28.74	$56.84	$84.93
Average Monthly Bill			$8.31	$13.32	$25.44	$48.72	$72.00	$95.28	$188.40	$281.52
READSBORO										
Customer Charge		$4.50	$54.00	$54.00	$54.00	$54.00	$54.00	$54.00	$54.00	$54.00
NYPA Block	100	$0.03	$10.11	$40.44	$40.44	$40.44	$40.44	$40.44	$40.44	$40.44
Levelized rate	12	$0.08		$0.00	$152.93	$407.81	$662.69	$917.57	$1,937.09	$2,956.61
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.350%	$2.24	$3.30	$8.65	$17.55	$26.46	$35.37	$71.00	$106.63
Average Monthly Bill			$5.53	$8.15	$21.33	$43.32	$65.30	$87.28	$175.21	$263.14

UTILITY:	BILLING ELEMENTS		KWh 25	KWh 100	KWh 250	KWh 500	KWh 750	KWh 1000	KWh 2000	KWh 3000
ROCHESTER										
Customer Charge		$10.74	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88
Peak Months	6	$0.16	$24.03	$96.12	$240.30	$480.60	$720.90	$961.20	$1,922.40	$2,883.60
Off Peak Months	6	$0.09	$13.23	$52.92	$132.30	$264.60	$396.90	$529.20	$1,058.40	$1,587.60
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.218%	$3.62	$6.05	$10.92	$19.04	$27.15	$35.27	$67.73	$100.19
Average Monthly Bill			$14.15	$23.66	$42.70	$74.43	$106.15	$137.88	$264.78	$391.69
STOWE										
Customer Charge		$7.61	$91.32	$91.32	$91.32	$91.32	$91.32	$91.32	$91.32	$91.32
NYPA Block	150	$0.05	$15.26	$61.02	$91.53	$91.53	$91.53	$91.53	$91.53	$91.53
Peak Months	5	$0.15		$0.00	$76.10	$266.33	$456.57	$646.81	$1,407.76	$2,168.71
Off Peak Months	7	$0.09		$0.00	$60.38	$211.34	$362.29	$513.25	$1,117.07	$1,720.89
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.272%	$2.90	$4.15	$8.69	$17.97	$27.26	$36.54	$73.68	$110.81
Average Monthly Bill			$9.12	$13.04	$27.33	$56.54	$85.75	$114.95	$231.78	$348.60
SWANTON										
Customer Charge		$5.77	$69.24	$69.24	$69.24	$69.24	$69.24	$69.24	$69.24	$69.24
NYPA Block	150	$0.03	$9.63	$38.52	$57.78	$57.78	$57.78	$57.78	$57.78	$57.78
Levelized rate	12	$0.10		$0.00	$125.84	$440.45	$755.06	$1,069.67	$2,328.11	$3,586.55
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.269%	$2.12	$2.90	$6.81	$15.28	$23.75	$32.23	$66.12	$100.01
Average Monthly Bill			$6.75	$9.22	$21.64	$48.56	$75.49	$102.41	$210.10	$317.80
VEC										
Customer Charge		$9.12	$109.44	$109.44	$109.44	$109.44	$109.44	$109.44	$109.44	$109.44
NYPA Block	100	$0.07	$19.75	$78.98	$78.98	$78.98	$78.98	$78.98	$78.98	$78.98
Levelized rate	12	$0.13		$0.00	$226.46	$603.89	$981.32	$1,358.75	$2,868.47	$4,378.19
Surcharge		6.93%	$8.95	$13.06	$28.75	$54.91	$81.06	$107.22	$211.84	$316.47
EEU Charge		0.229%	$3.17	$4.62	$10.17	$19.42	$28.67	$37.92	$74.92	$111.92
Average Monthly Bill			$11.78	$17.17	$37.82	$72.22	$106.62	$141.03	$278.64	$416.25
VT. MARBLE										
Customer Charge		$3.66	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92
First Block	100	$0.08	$22.95	$91.80	$91.80	$91.80	$91.80	$91.80	$91.80	$91.80
Peak Months	4	$0.09		$0.00	$53.94	$143.84	$233.74	$323.64	$683.24	$1,042.84
Off Peak Months	8	$0.07		$0.00	$83.76	$223.36	$362.96	$502.56	$1,060.96	$1,619.36
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.340%	$2.27	$4.61	$9.29	$17.08	$24.88	$32.68	$63.86	$95.05
Average Monthly Bill			$5.76	$11.69	$23.56	$43.33	$63.11	$82.88	$161.98	$241.08
WEC										
Customer Charge		$9.24	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88
NYPA Block	150	$0.07	$22.16	$88.64	$132.97	$132.97	$132.97	$132.97	$132.97	$132.97
Levelized rate	12	$0.16		$0.00	$194.48	$680.69	$1,166.90	$1,653.11	$3,597.95	$5,542.79
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		0.080%	$1.07	$1.60	$3.51	$7.41	$11.31	$15.21	$30.80	$46.40
Average Monthly Bill			$11.18	$16.76	$36.82	$77.66	$118.51	$159.35	$322.72	$486.09

Figure 2-1

Revenue per kWh and Use per Customer
Residential Customers, 1940-2003

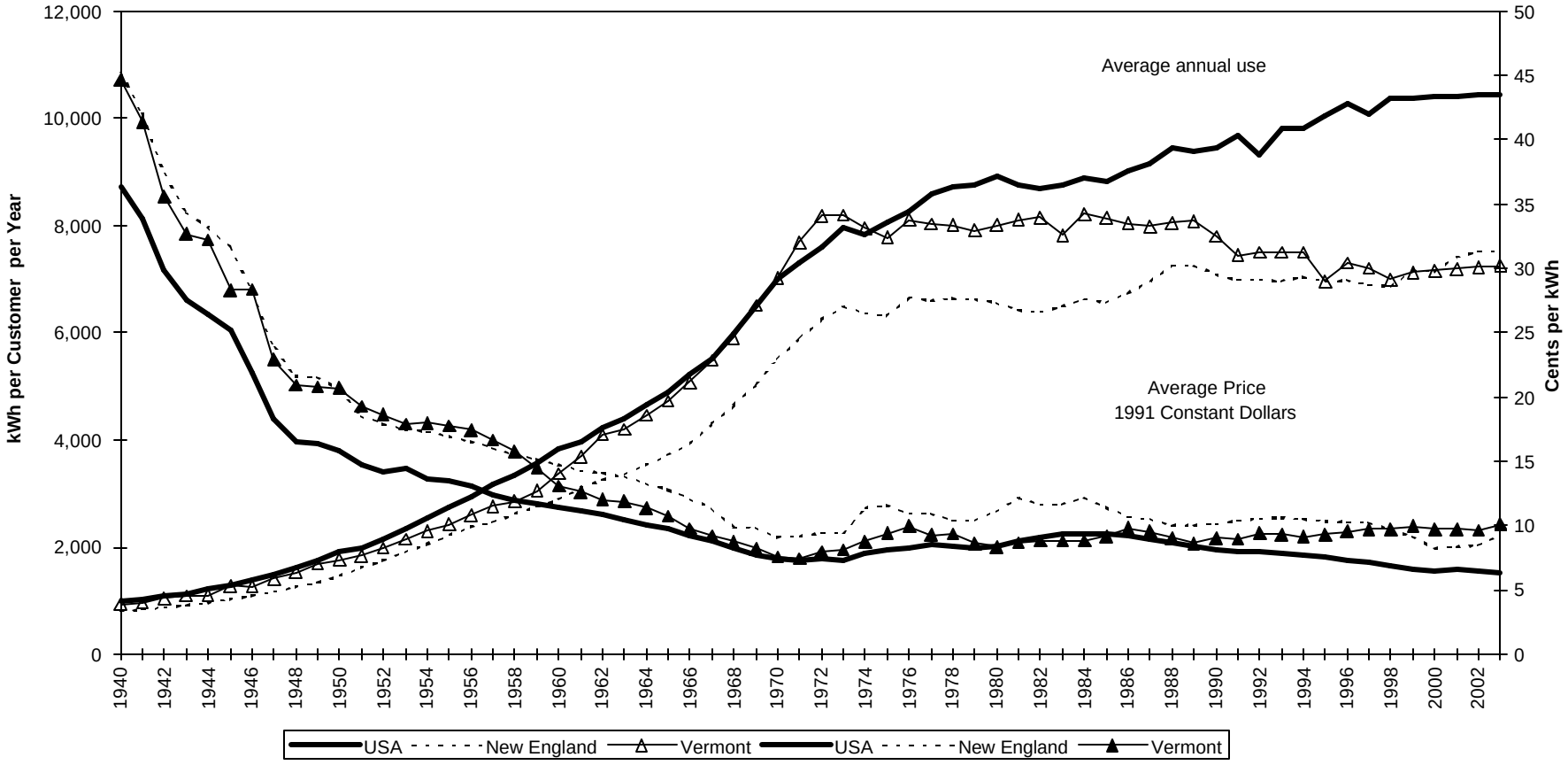


Table 2-3A

Vermont Electric Utilities: Revenue and Usage,

Residential 2002 - 2003

2003

Company	Residential Rev	kWh	Residential Customers	Avg Res Use (kWh)	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,465,417	10,756,509	1,857	5,792	13.62	19
BED	$8,980,305	94,247,000	16,022	5,882	9.53	7
Citizens	$15,544,009	117,341,000	18,731	6,265	13.25	17
CVPS	$125,401,398	948,278,000	127,881	7,415	13.22	16
Enosburg	$1,670,509	12,396,560	1,376	9,009	13.48	18
GMP	$75,404,351	581,047,000	74,707	7,778	12.98	15
Hardwick	$2,865,947	23,071,207	3,639	6,340	12.42	14
Hyde Park	$883,601	8,356,829	1,071	7,803	10.57	9
Jacksonville	$397,911	3,554,316	537	6,619	11.20	11
Johnson	$446,816	5,553,697	703	7,900	8.05	1
Ludlow	$1,504,157	16,646,187	2,908	5,724	9.04	4
Lyndonville	$3,037,635	33,038,000	4,507	7,330	9.19	5
Morrisville	$2,250,538	20,554,000	3,048	6,743	10.95	10
Northfield	$1,268,678	11,042,249	1,642	6,725	11.49	12
Orleans	$385,401	4,115,380	567	7,258	9.36	6
Readsboro	$145,464	1,697,838	266	6,383	8.57	3
Rochester	$638,483	4,398,535	698	6,302	14.52	21
Stowe	$2,468,355	20,803,553	2899	7,176	11.87	13
Swanton	$2,460,510	24,885,284	2970	8,379	9.89	8
VEC	$16,786,169	121,364,000	15,759	7,701	13.83	20
VMPD OMYA	$514,860	6,230,704	817	7,626	8.26	2
WEC	$9,367,991	59,324,000	9,426	6,294	15.79	22
Total	$273,888,505	2,128,701,848	292,031	7,289	12.87	

2002

Company	Residential Rev	kWh	Residential Customers	Avg Res Use (kWh)	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,340,596	10,473,998	1,856	5,643	12.80	16
BED	$8,690,207	91,618,000	15,969	5,737	9.49	7
Citizens	$14,044,434	115,456,000	18,279	6,316	12.16	13
CVPS	$121,419,967	915,031,000	126,358	7,242	13.27	19
Enosburg	$1,563,198	11,970,522	1,361	8,795	13.06	17
GMP	$73,540,660	553,294,000	73,861	7,491	13.29	20
Hardwick	$2,769,516	22,102,098	3,602	6,136	12.53	14
Hyde Park	$780,360	7,952,343	1,053	7,552	9.81	8
Jacksonville	$371,844	3,401,022	579	5,874	10.93	10
Johnson	$428,463	5,710,907	702	8,135	7.50	1
Ludlow	$1,436,892	16,049,660	2,886	5,561	8.95	5
Lyndonville	$2,943,235	32,019,000	4,466	7,170	9.19	6
Morrisville	$2,157,057	19,581,000	3,455	5,667	11.02	11
Northfield	$1,340,001	10,618,529	1,632	6,506	12.62	15
Orleans	$349,573	4,101,397	599	6,847	8.52	3
Readsboro	$143,897	1,652,023	266	6,211	8.71	4
Rochester	$632,623	4,346,336	700	6,209	14.56	21
Stowe	$2,285,661	19,401,384	2,872	6,755	11.78	12
Swanton	$2,407,805	24,032,012	2,930	8,202	10.02	9
VEC	$15,329,282	115,672,000	15,466	7,479	13.25	18
VMPD OMYA	$498,024	6,075,937	809	7,510	8.20	2
WEC	$8,759,178	55,542,000	9,265	5,995	15.77	22
Total	$263,232,473	2,046,101,168	288,966	7,081	12.87	

Source: Annual Reports

Table 2-3B

Vermont Electric Utilities: Revenue and Usage,

Commercial, 2002 - 2003

2003

Company	Commercial Revenue	kWh	Commercial Customers	Avg Com Use (kWh)	Com Rev/kWh (cents)	Rank by Rev/kWh
Barton	$457,402	3,200,748	166	19,282	14.29	20
BED	$18,947,400	187,128,000	3,614	51,779	10.13	3
Citizens	$7,896,180	73,679,000	2,060	35,767	10.72	6
CVPS	$102,766,407	848,413,000	19,922	42,587	12.11	17
Enosburg	$234,172	1,779,662	113	15,749	13.16	18
GMP	$74,070,477	703,036,000	13,346	52,678	10.54	5
Hardwick	$526,922	4,509,129	355	12,702	11.69	14
Hyde Park	$146,446	1,286,262	108	11,910	11.39	12
Jacksonville	$78,548	703,045	50	14,061	11.17	11
Johnson	$116,572	1,386,797	101	13,731	8.41	1
Ludlow	$1,447,321	13,332,373	629	21,196	10.86	7
Lyndonville	$1,077,832	9,039,000	655	13,800	11.92	15
Morrisville	$821,228	7,359,000	462	15,929	11.16	10
Northfield	$353,927	2,966,043	181	16,387	11.93	16
Orleans	$156,519	1,516,760	64	23,699	10.32	4
Readsboro	$35,306	305,428	43	7,103	11.56	13
Rochester	$225,754	1,511,820	122	12,392	14.93	21
Stowe	$3,426,279	30,719,920	573	53,612	11.15	9
Swanton	$417,933	3,799,639	280	13,570	11.00	8
VEC	$1,083,663	8,065,000	615	13,114	13.44	19
VMPD OMYA	$393,463	4,392,084	69	63,653	8.96	2
WEC	$561,833	3,383,000	255	13,267	16.61	22
Total	$215,241,584	1,911,511,710	43,783	43,659	11.26	

2002

Company	Commercial Revenue	kWh	Commercial Customers	Avg Com Use (kWh)	Com Rev/kWh (cents)	Rank by Rev/kWh
Barton	$465,919	3,088,68	167	18,495	15.08	21
BED	$18,860,375	185,343,000	3,582	51,743	10.18	4
Citizens	$7,152,757	73,288,000	1,932	37,934	9.76	3
CVPS	$103,081,615	858,537,000	19,481	44,070	12.01	15
Enosburg	$882,130	7,143,023	123	58,073	12.35	17
GMP	$76,944,624	723,641,000	13,173	54,934	10.63	7
Hardwick	$492,405	4,441,888	355	12,512	11.09	9
Hyde Park	$139,693	1,263,942	116	10,896	11.05	8
Jacksonville	$77,620	698,025	54	12,926	11.12	10
Johnson	$110,298	1,403,003	101	13,891	7.86	1
Ludlow	$1,301,087	12,604,817	608	20,732	10.32	5
Lyndonville	$1,071,012	8,953,000	651	13,753	11.96	14
Morrisville	$786,867	6,953,000	516	13,475	11.32	12
Northfield	$353,594	2,809,075	181	15,520	12.59	18
Orleans	$186,108	1,568,576	70	22,408	11.86	13
Readsboro	$34,000	279,210	42	6,648	12.18	16
Rochester	$207,244	1,406,753	122	11,531	14.73	20
Stowe	$3,307,259	31,189,163	594	52,507	10.60	6
Swanton	$447,001	3,964,594	276	14,364	11.27	11
VEC	$973,466	7,455,000	607	12,282	13.06	19
VMPD OMYA	$385,808	4,431,500	72	61,549	8.71	2
WEC	$543,500	3,290,000	243	13,539	16.52	22
Total	$217,804,382	1,943,752,256	43,066	45,134	11.21	

Source: Annual Reports

Table 2-3C

Vermont Electric Utilities: Revenue and Usage,

Industrial, 2002 - 2003

2003

Company	Industrial Revenue	kWh	Industrial Customers	Avg Ind Use (kWh)	Ind Rev/kWh (cents)	Rank by Rev/kWh
Barton	$0	0	0	0	0.00	0
BED	$5,522,433	65,287,000	15	4,352,467	8.46	4
Citizens	$8,313,846	104,847,000	8	13,105,875	7.93	2
CVPS	$33,716,139	396,081,000	38	10,423,184	8.51	5
Enosburg	$738,638	5,924,148	13	455,704	12.47	17
GMP	$47,937,044	645,270,000	24	26,886,250	7.43	1
Hardwick	$383,304	3,560,981	20	178,049	10.76	11
Hyde Park	$161,129	1,411,472	2	705,736	11.42	16
Jacksonville	$134,930	1,356,278	4	339,070	9.95	6
Johnson	$689,904	8,292,434	15	552,829	8.32	3
Ludlow	$1,580,730	15,571,135	6	2,595,189	10.15	8
Lyndonville	$2,010,289	18,576,000	44	422,182	10.82	13
Morrisville	$1,776,687	16,717,000	45	371,489	10.63	10
Northfield	$1,247,220	11,480,411	15	765,361	10.86	14
Orleans	$839,796	7,785,600	1	7,785,600	10.79	12
Readsboro	$36,807	263,181	9	29,242	13.99	19
Rochester	$0	0	0	0	0.00	0
Stowe	$592,584	5,308,675	14	379,191	11.16	15
Swanton	$3,035,044	30,377,637	91	333,820	9.99	7
VEC	$2,302,861	22,571,000	91	248,033	10.20	9
VMPD OMYA	$13,626,757	197,499,429	2	98,749,715	6.90	0
WEC	$428,414	3,191,000	11	290,091	13.43	18
Total	$125,074,556	1,561,371,381	468	3,336,264	8.01	

2002

Company	Industrial Revenue	kWh	Industrial Customers	Avg Ind Use (kWh)	Ind Rev/kWh (cents)	Rank by Rev/kWh
Barton	$0	0	0	0	0.00	0
BED	$5,172,073	60,495,000	14	4,321,071	8.55	6
Citizens	$7,758,257	103,514,000	8	12,939,250	7.49	3
CVPS	$34,206,038	407,335,000	37	11,009,054	8.40	5
Enosburg	$0	0	0	0	0.00	0
GMP	$48,600,542	661,480,000	21	31,499,048	7.35	2
Hardwick	$368,796	3,510,551	22	159,571	10.51	13
Hyde Park	$143,731	1,424,462	2	712,231	10.09	10
Jacksonville	$148,170	1,499,685	12	124,974	9.88	9
Johnson	$632,770	8,224,731	14	587,481	7.69	4
Ludlow	$1,775,569	16,957,360	5	3,391,472	10.47	12
Lyndonville	$1,986,137	18,228,000	40	455,700	10.90	15
Morrisville	$1,878,725	17,723,000	54	328,204	10.60	14
Northfield	$1,224,752	11,035,197	15	735,680	11.10	16
Orleans	$974,327	9,465,600	1	9,465,600	10.29	11
Readsboro	$30,895	241,347	9	26,816	12.80	18
Rochester	$0	0	0	0	0.00	0
Stowe	$865,678	6,977,240	14	498,374	12.41	17
Swanton	$3,209,263	32,955,410	84	392,326	9.74	7
VEC	$2,115,746	21,488,000	91	236,132	9.85	8
VMPD OMYA	$13,722,655	206,743,614	2	103,371,807	6.64	1
WEC	$421,837	3,138,000	10	313,800	13.44	19
Total	$125,235,961	1,592,436,197	455	3,499,860	7.86	

Source: Annual Reports

Table 2-3D

Vermont Electric Utilities: Revenue and Usage, Total, 2002 - 2003

2003

Company	Total Rate Revenue	kWh	Total Customers	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$2,061,616	14,872,806	2,052	13.86	20
BED	$33,767,150	349,920,000	19,652	9.65	4
Citizens	$32,831,734	305,767,000	21,222	10.74	10
CVPS	$263,483,036	2,198,162,000	148,014	11.99	16
Enosburg	$2,878,630	21,732,136	1,548	13.25	18
GMP	$198,606,176	1,933,728,000	88,132	10.27	8
Hardwick	$3,813,493	31,341,520	4,022	12.17	17
Hyde Park	$1,268,747	11,739,128	1,222	10.81	11
Jacksonville	$611,929	5,659,971	660	10.81	12
Johnson	$1,285,581	15,582,880	849	8.25	2
Ludlow	$4,571,278	45,705,488	3,547	10.00	5
Lyndonville	$6,877,094	67,729,000	5,206	10.15	7
Morrisville	$4,869,787	44,794,000	3,556	10.87	13
Northfield	$3,108,911	27,382,791	2,271	11.35	14
Orleans	$1,449,463	14,068,353	652	10.30	9
Readsboro	$222,565	2,348,107	414	9.48	3
Rochester	$921,685	6,268,737	831	14.70	21
Stowe	$6,908,880	60,304,820	3,531	11.46	15
Swanton	$5,977,156	59,494,111	3,344	10.05	6
VEC	$20,249,057	152,362,000	16,512	13.29	19
VMPD OMYA	$14,563,422	208,220,617	895	6.99	1
WEC	$10,359,978	65,906,000	9,694	15.72	22
Total	$620,687,368	5,643,089,465	337,826	11.00	

2002

Company	Total Rate Revenue	kWh	Total Customers	Rev/kWh (cents)	Rank by Rev/kWh
Barton	$1,949,595	14,433,523	2,055	13.51	20
BED	$33,020,335	340,502,000	19,566	9.70	4
Citizens	$29,953,173	302,182,000	20,658	9.91	5
CVPS	$260,315,258	2,186,344,000	146,051	11.91	15
Enosburg	$2,645,368	20,583,391	1,530	12.85	19
GMP	$200,296,724	1,943,455,000	87,110	10.31	11
Hardwick	$3,666,711	30,252,145	3,987	12.12	17
Hyde Park	$1,130,963	11,244,013	1,198	10.06	9
Jacksonville	$605,478	5,707,800	647	10.61	12
Johnson	$1,202,904	15,696,800	839	7.66	2
Ludlow	$4,548,971	45,832,273	3,503	9.93	6
Lyndonville	$6,736,937	66,301,000	5,157	10.16	10
Morrisville	$4,844,832	44,427,000	4,026	10.91	13
Northfield	$3,170,214	26,348,178	2,260	12.03	16
Orleans	$1,574,387	15,779,149	689	9.98	7
Readsboro	$213,750	2,254,060	414	9.48	3
Rochester	$897,765	6,115,521	833	14.68	21
Stowe	$6,833,579	60,739,195	3,525	11.25	14
Swanton	$6,127,309	61,363,113	3,293	9.99	8
VEC	$18,491,415	144,978,000	16,211	12.75	18
VMPD OMYA	$14,633,226	217,349,451	890	6.73	1
WEC	$9,726,255	61,978,000	9,520	15.69	22
Total	$612,585,149	5,623,865,612	333,962	10.89	

Source: Company Annual Reports

Note: Total revenues and sales include additional revenue and sales not included in the 3 major classes.

Table 2-4

TYPICAL RESIDENTIAL BILLS AS OF NOVEMBER 2004

	BILLING ELEMENTS		kWh 25	kWh 100	kWh 250	kWh 500	kWh 750	kWh 1000	kWh 2000	kWh 3000
BARTON										
Customer Charge		$7.43	$89.16	$89.16	$89.16	$89.16	$89.16	$89.16	$89.16	$89.16
NYPA Block	100	$0.07	$19.88	$79.51	$79.51	$79.51	$79.51	$79.51	$79.51	$79.51
Levelized rate	12	$0.14	$0.00	$0.00	$250.99	$669.31	$1,087.63	$1,505.95	$3,179.23	$4,852.51
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$9.17	$14.37	$35.77	$71.42	$107.08	$142.73	$285.35	$427.97
BURLINGTON										
Customer Charge		$7.86	$94.32	$94.32	$94.32	$94.32	$94.32	$94.32	$94.32	$94.32
NYPA Block	200	$0.06	$17.84	$71.34	$142.68	$142.68	$142.68	$142.68	$142.68	$142.68
Peak Months	4	$0.11		$0.00	$21.06	$126.37	$231.68	$336.99	$758.22	$1,179.46
Off Peak Months	8	$0.10		$0.00	$40.57	$243.42	$446.28	$649.13	$1,460.55	$2,271.96
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.0024	$0.74	$2.96	$7.40	$14.81	$22.21	$29.62	$59.23	$88.85
Average Monthly Bill			$9.41	$14.05	$25.50	$51.80	$78.10	$104.39	$209.58	$314.77
CITIZENS										
Customer Charge		$7.66	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92
First Block(off-Peak)	250	$0.110	$16.61	$66.45	$166.13	$166.13	$166.13	$166.13	$166.13	$166.13
First Block (peak)	250	$0.11	$16.63	$66.52	$166.29	$166.29	$166.29	$166.29	$166.29	$166.29
Peak Months	6	$0.127		$0.00	$0.00	$191.88	$383.76	$575.64	$1,343.16	$2,110.68
Off Peak Months	6	$0.11		$0.00	$0.00	$166.46	$332.91	$499.37	$1,165.19	$1,831.01
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$10.51	$19.06	$36.16	$66.81	$97.47	$128.13	$250.75	$373.38
CVPS										
Customer Charge		$11.38	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56	$136.56
Levelized rate	12	$0.117	$35.22	$140.88	$352.20	$704.40	$1,056.60	$1,408.80	$2,817.60	$4,226.40
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.11	$0.45	$1.12	$2.24	$3.36	$4.48	$8.96	$13.44
Average Monthly Bill			$14.32	$23.16	$40.82	$70.27	$99.71	$129.15	$246.93	$364.70
ENOSBURG										
Customer Charge		$7.66	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92	$91.92
NYPA Block	125	$0.0559	$16.78	$67.12	$83.90	$83.90	$83.90	$83.90	$83.90	$83.90
Levelized rate	12	$0.135	$0.00	$0.00	$202.80	$608.40	$1,014.00	$1,419.60	$3,042.00	$4,664.40
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$9.14	$13.57	$32.35	$66.94	$101.54	$136.13	$274.51	$412.89
GMP										
Customer Charge		$11.27	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24	$135.24
Levelized rate	12	$0.111	$33.44	$133.75	$334.38	$668.76	$1,003.14	$1,337.52	$2,675.04	$4,012.56
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$14.14	$22.73	$39.93	$68.59	$97.25	$125.91	$240.55	$355.19
HARDWICK										
Customer Charge		$9.18	$110.16	$110.16	$110.16	$110.16	$110.16	$110.16	$110.16	$110.16
NYPA Block	100	$0.0488	$14.64	$58.57	$58.57	$58.57	$58.57	$58.57	$58.57	$58.57
Levelized rate	12	$0.1388	$0.00	$0.00	$249.95	$666.53	$1,083.11	$1,499.69	$3,166.01	$4,832.33
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$10.48	$14.38	$35.69	$71.20	$106.71	$142.22	$284.26	$426.30

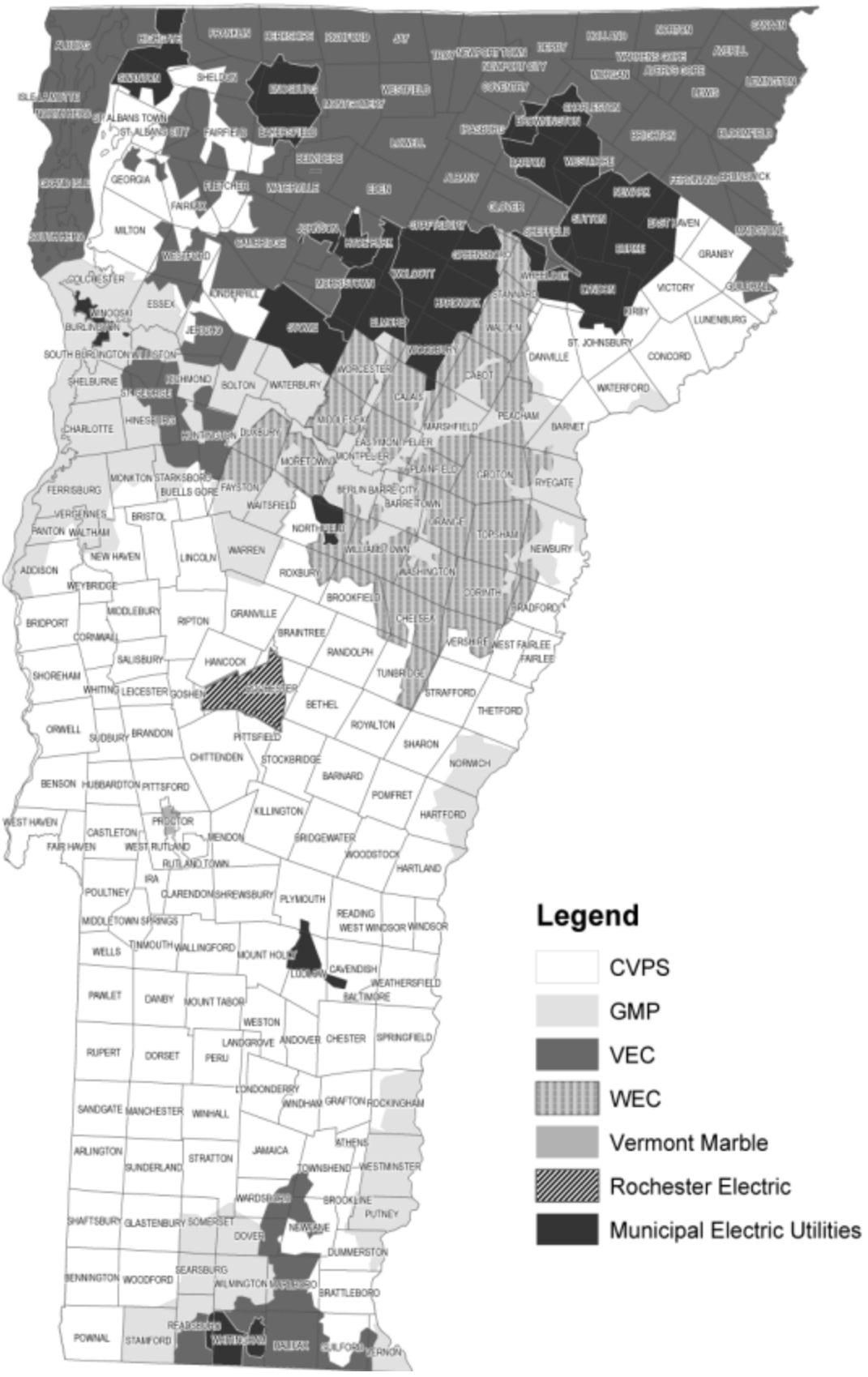
TYPICAL RESIDENTIAL BILLS AS OF NOVEMBER 2004

	BILLING ELEMENTS		kWh 25	kWh 100	kWh 250	kWh 500	kWh 750	kWh 1000	kWh 2000	kWh 3000
HYDE PARK										
Customer Charge		$9.11	$109.32	$109.32	$109.32	$109.32	$109.32	$109.32	$109.32	$109.32
NYPA Block	100	$0.059	$17.67	$70.68	$70.68	$70.68	$70.68	$70.68	$70.68	$70.68
Levelized rate	12	$0.1056		$0.00	$190.19	$507.17	$824.15	$1,141.13	$2,409.05	$3,676.97
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$10.66	$15.32	$31.64	$58.85	$86.06	$113.27	$222.11	$330.95
JACKSONVILLE										
Customer Charge		$5.15	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80	$61.80
NYPA Block	175	$0.0499	$14.97	$59.88	$104.79	$104.79	$104.79	$104.79	$104.79	$104.79
Peak Months	5	$0.1347		$0.00	$50.51	$218.89	$387.26	$555.64	$1,229.14	$1,902.64
Off Peak Months	7	$0.1064		$0.00	$55.86	$242.06	$428.26	$614.46	$1,359.26	$2,104.06
Surcharge	3/04	0.249%	$19.17	$30.38	$68.16	$156.70	$245.23	$333.77	$687.92	$1,042.07
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$8.07	$12.99	$29.22	$66.94	$104.66	$142.38	$293.27	$444.15
JOHNSON Bills rendered 3/1/04										
Customer Charge		$6.08	$72.96	$72.96	$72.96	$72.96	$72.96	$72.96	$72.96	$72.96
NYPA Block	100	$0.0526	$15.80	$63.20	$63.20	$63.20	$63.20	$63.20	$63.20	$63.20
Levelized rate	12	$0.0813		$0.00	$146.39	$390.38	$634.37	$878.36	$1,854.32	$2,830.28
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$7.48	$11.67	$24.34	$45.47	$66.60	$87.72	$172.23	$256.74
LUDLOW										
Customer Charge		$5.63	$67.56	$67.56	$67.56	$67.56	$67.56	$67.56	$67.56	$67.56
NYPA Block	125	$0.0343	$10.31	$41.26	$51.57	$51.57	$51.57	$51.57	$51.57	$51.57
Levelized rate	12	$0.0775		$0.00	$116.27	$348.80	$581.33	$813.86	$1,743.98	$2,674.10
Surcharge		0.108%	$8.47	$11.84	$25.61	$50.91	$76.21	$101.51	$202.71	$303.90
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$7.28	$10.37	$22.55	$44.83	$67.11	$89.39	$178.51	$267.63
LYNDONVILLE										
Customer Charge		$6.96	$83.52	$83.52	$83.52	$83.52	$83.52	$83.52	$83.52	$83.52
NYPA Block	100	$0.0518	$15.56	$62.23	$62.23	$62.23	$62.23	$62.23	$62.23	$62.23
Levelized rate	12	$0.1064		$0.00	$191.61	$510.96	$830.31	$1,149.66	$2,427.06	$3,704.46
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$8.34	$12.46	$28.91	$56.32	$83.72	$111.13	$220.76	$330.39
MORRISVILLE										
Customer Charge		$5.47	$65.64	$65.64	$65.64	$65.64	$65.64	$65.64	$65.64	$65.64
NYPA Block	150	$0.0489	$14.69	$58.76	$88.15	$88.15	$88.15	$88.15	$88.15	$88.15
Peak Months	5	$0.1461		$0.00	$73.09	$255.82	$438.54	$621.27	$1,352.17	$2,083.07
Off Peak Months	7	$0.1154		$0.00	$80.82	$282.85	$484.89	$686.93	$1,495.08	$2,303.23
Surcharge	2	0.113%	$9.10	$14.09	$34.86	$78.45	$122.05	$165.64	$340.02	$514.39
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$7.53	$11.86	$29.34	$65.83	$102.32	$138.82	$284.78	$430.75
NORTHFIELD										
Customer Charge		$6.57	$78.84	$78.84	$78.84	$78.84	$78.84	$78.84	$78.84	$78.84
NYPA Block	100	$0.0521	$15.63	$62.53	$62.53	$62.53	$62.53	$62.53	$62.53	$62.53
Levelized rate	12	$0.1124		$0.00	$202.41	$539.76	$877.11	$1,214.46	$2,563.86	$3,913.26
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$7.95	$12.10	$29.44	$58.35	$87.26	$116.17	$231.80	$347.43

TYPICAL RESIDENTIAL BILLS AS OF NOVEMBER 2004

	BILLING ELEMENTS		kWh 25	kWh 100	kWh 250	kWh 500	kWh 750	kWh 1000	kWh 2000	kWh 3000
ORLEANS										
Customer Charge		$7.19	$86.28	$86.28	$86.28	$86.28	$86.28	$86.28	$86.28	$86.28
NYPA Block	100	$0.0548	$16.46	$65.84	$65.84	$65.84	$65.84	$65.84	$65.84	$65.84
Levelized rate	12	$0.0867		$0.00	$156.13	$416.35	$676.57	$936.79	$1,977.67	$3,018.55
Surcharge	9/04	0.0566	$5.82	$8.61	$17.45	$32.18	$46.90	$61.63	$120.55	$179.46
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$9.13	$13.71	$27.94	$51.64	$75.35	$99.06	$193.89	$288.72
READSBORO										
Customer Charge		$4.68	$56.16	$56.16	$56.16	$56.16	$56.16	$56.16	$56.16	$56.16
NYPA Block	100	$0.0402	$12.09	$48.35	$48.35	$48.35	$48.35	$48.35	$48.35	$48.35
Levelized rate	12	$0.0895		$0.00	$161.14	$429.70	$698.26	$966.82	$2,041.06	$3,115.30
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$5.77	$9.03	$22.93	$46.11	$69.28	$92.46	$185.16	$277.86
ROCHESTER										
Customer Charge		$10.74	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88	$128.88
Peak Months	6	$0.1602	$24.03	$96.12	$240.30	$480.60	$720.90	$961.20	$1,922.40	$2,883.60
Off Peak Months	6	$0.0882	$13.23	$52.92	$132.30	$264.60	$396.90	$529.20	$1,058.40	$1,587.60
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$13.92	$23.48	$42.59	$74.43	$106.28	$138.12	$265.50	$392.88
STOWE										
Customer Charge		$8.07	$96.84	$96.84	$96.84	$96.84	$96.84	$96.84	$96.84	$96.84
NYPA Block	150	$0.0539	$16.19	$64.75	$97.13	$97.13	$97.13	$97.13	$97.13	$97.13
Peak Months	5	$0.1614		$0.00	$80.75	$282.61	$484.47	$686.33	$1,493.78	$2,301.23
Off Peak Months	7	0.09153		$0.00	$64.07	$224.25	$384.43	$544.60	$1,185.31	$1,826.02
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$9.50	$13.78	$29.03	$59.99	$90.96	$121.92	$245.78	$369.64
SWANTON										
Customer Charge		$6.93	$83.16	$83.16	$83.16	$83.16	$83.16	$83.16	$83.16	$83.16
NYPA Block	100	$0.038	$11.57	$46.30	$46.30	$46.30	$46.30	$46.30	$46.30	$46.30
Levelized rate	12	$0.095		$0.00	$172.26	$459.36	$746.46	$1,033.56	$2,181.96	$3,330.36
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$7.97	$11.11	$25.94	$50.66	$75.38	$100.10	$198.98	$297.86
VEC										
Customer Charge		$9.69	$116.28	$116.28	$116.28	$116.28	$116.28	$116.28	$116.28	$116.28
NYPA Block	100	$0.069	$20.97	$83.88	$83.88	$83.88	$83.88	$83.88	$83.88	$83.88
Levelized rate	12	$0.133		$0.00	$240.48	$641.28	$1,042.08	$1,442.88	$3,046.08	$4,649.28
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$11.52	$17.00	$37.52	$71.71	$105.91	$140.10	$276.88	$413.66
VT. MARBLE										
Customer Charge		$3.66	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92	$43.92
First Block	100	$0.076	$22.95	$91.80	$91.80	$91.80	$91.80	$91.80	$91.80	$91.80
Peak Months	4	$0.089		$0.00	$53.94	$143.84	$233.74	$323.64	$683.24	$1,042.84
Off Peak Months	8	$0.069		$0.00	$83.76	$223.36	$362.96	$502.56	$1,060.96	$1,619.36
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.00318	$0.95	$3.82	$9.54	$19.08	$28.62	$38.16	$76.32	$114.48
Average Monthly Bill			$5.65	$11.63	$23.58	$43.50	$63.42	$83.34	$163.02	$242.70
WEC										
Customer Charge		$9.24	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88	$110.88
NYPA Block	150	$0.073	$22.16	$88.64	$132.97	$132.97	$132.97	$132.97	$132.97	$132.97
Levelized rate	12	$0.162		$0.00	$194.48	$680.69	$1,166.90	$1,653.11	$3,597.95	$5,542.79
Surcharge		0.00%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
EEU Charge		$0.002254	$0.68	$2.70	$6.76	$13.52	$20.29	$27.05	$54.10	$81.14
Average Monthly Bill			$11.14	$16.85	$37.09	$78.17	$119.25	$160.33	$324.66	$488.98

Figure 2-2 Electric Utilities Franchise Areas



E. Electric Loads

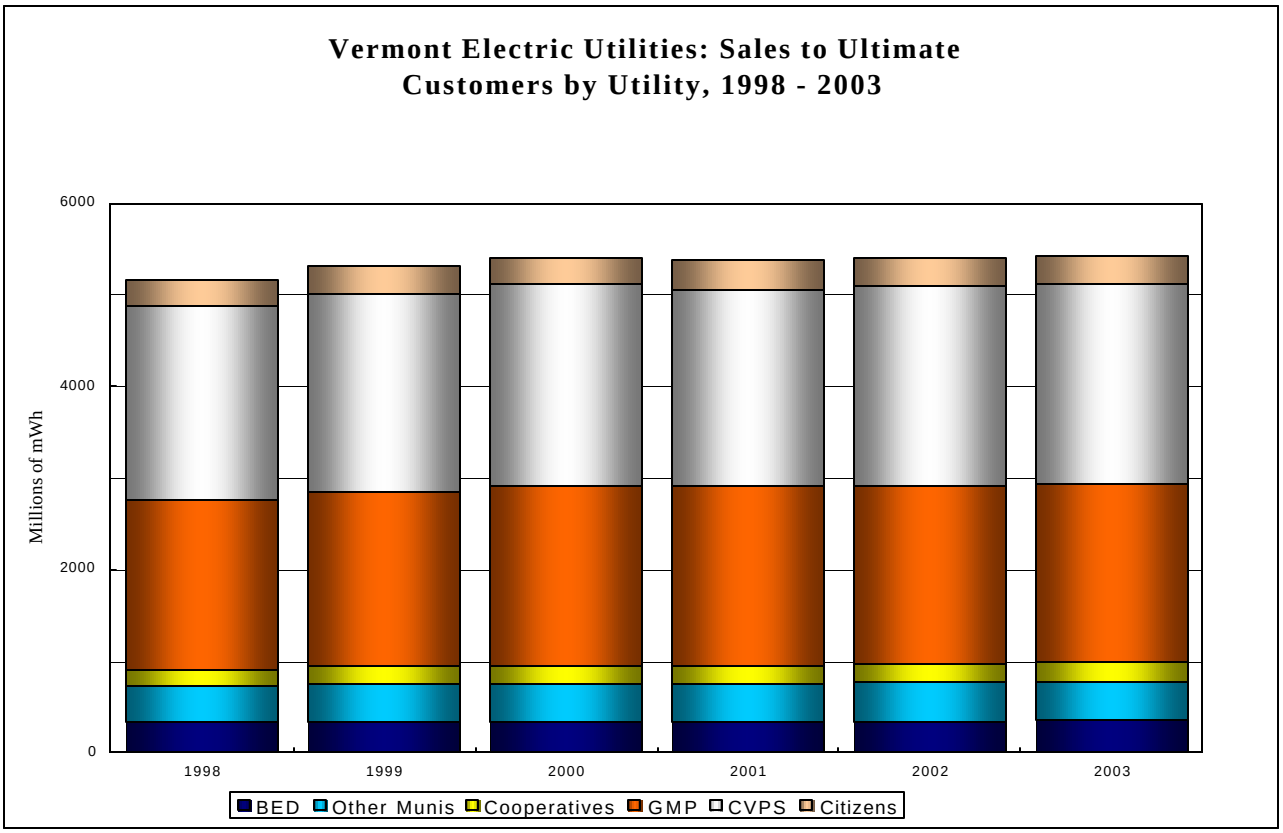
For Vermont, 2000 and 2001 brought load growth of 1.90% in 2000 and –0.80% in 2001 in electricity sales to ultimate customers. The 2002 and 2003 period brought load growth of 0.73% in 2002 and 0.34% in 2003 in electricity sales to ultimate customers. Table 2.5 and accompanying graph shows sales to ultimate customers by Vermont's utilities. Total sales to all customer classes in 2000 and 2001 were 5,628,205,299 kWh and 5,583,057,745 kWh respectively .For 2002 5,623,865,612 kWh increasing to 5,643,089,465 kWh in 2003 (See Table 2.6.)

The number of residential customers increased by 6296 (2.9%) while average residential usage increased 3.66% during the period from 2000-2004 Total residential sales during the biennium showed an increase of about 5.94%. Industrial sales increased 3.70% in 2000 and declined 2.45% in 2001. The decline continued during 2002 at the rate of 1.20% and a 1.95% decline in 2003. Commercial sales increased 2.57% in 2000; 1.05% in 2001; 1.19% in 2002 and 1.66% in 2003.

Vermont's system peak loads are strongly weather dependent. In 2000 and 2001, the system peak reached 997 MW surpassing the previous winter peak of 968 MW set in December 1989. (See Figure 2.5.) Summer peak loads continue to increase annually and are now rivaling winter peaks. In 2001 the summer peak was 906 MW.

Preliminary data for 2002-2004 indicates this trend of increased summer use continues, Vermont could be a summer peaking state in the near future. This has significant implications for Vermont. For system operators, it means increasing difficulty in scheduling maintenance, plus the impacts on both seasons must weigh into any supply or transmission planning efforts. For Vermont energy users, it may mean that power cost savings we experienced because our peak demands were at a time (winter) when other areas had surplus power may not continue.

Table 2-5



Sales to Ultimate Customers by Utility (kWh)

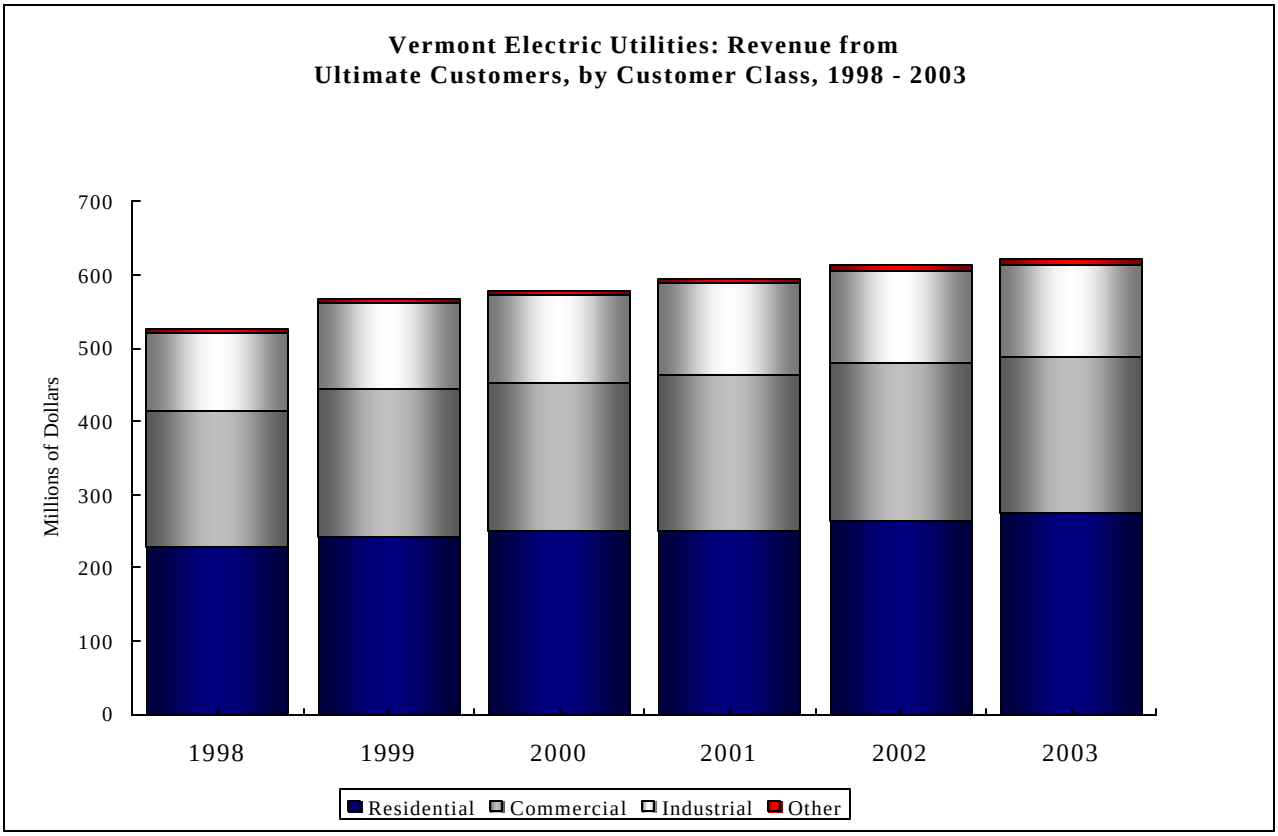
Utility	1998	1999	2000	2001	2002	2003
Small Privates	201,848,016	215,575,796	218,803,671	215,635,029	223,464,972	214,489,354
Citizens	276,416,000	291,172,000	303,351,000	305,446,000	302,182,000	305,767,000
CVPS	2,125,930,000	2,172,798,000	2,199,561,000	2,161,059,000	2,186,344,000	2,198,162,000
GMP	1,840,948,000	1,901,783,000	1,951,065,000	1,956,147,000	1,943,455,000	1,933,728,000
Cooperatives	189,302,000	196,273,000	201,501,000	201,390,000	206,956,000	218,268,000
Other Munis	396,196,051	408,608,930	415,295,628	410,578,716	420,961,640	422,755,111
BED	327,166,000	337,009,000	338,628,000	332,802,000	340,502,000	349,920,000
Total	5,357,806,067	5,523,219,726	5,628,205,299	5,583,057,745	5,623,865,612	5,643,089,465

Percentage of Sales to Ultimate Customers by Utility

Utility	1998	1999	2000	2001	2002	2003
Small Privates	3.77	3.90	3.89	3.86	3.97	3.80
Citizens	5.16	5.27	5.39	5.47	5.37	5.42
CVPS	39.68	39.34	39.08	38.71	38.88	38.95
GMP	34.36	34.43	34.67	35.04	34.56	34.27
Cooperatives	3.53	3.55	3.58	3.61	3.68	3.87
Other Munis	7.39	7.40	7.38	7.35	7.49	7.49
BED	6.11	6.10	6.02	5.96	6.05	6.20
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Annual Reports

Table 2-6



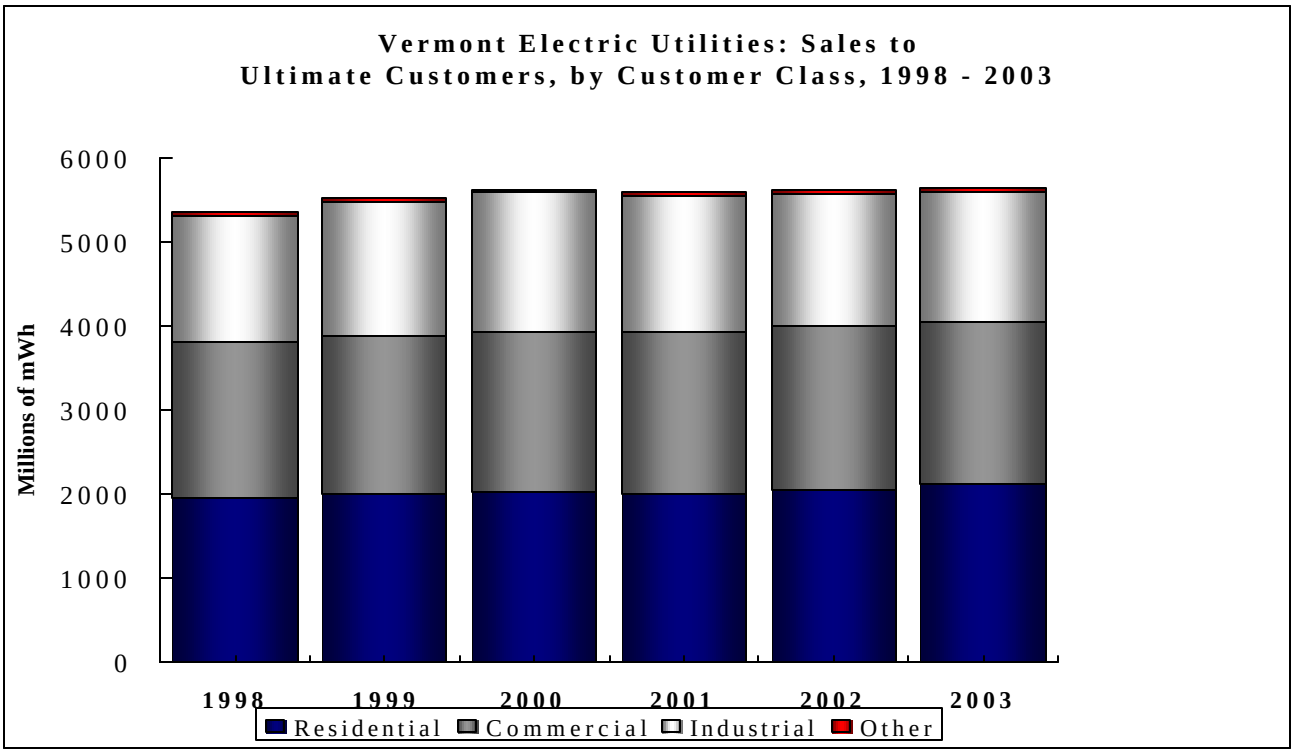
Revenue from Ultimate Customers by Customer Class

	1998	1999	2000	2001	2002	2003
Residential	227,100,330	242,727,167	250,524,813	251,362,859	263,232,473	273,888,505
Commercial	187,879,236	202,492,316	202,040,252	210,964,392	217,804,382	215,241,584
Industrial	105,939,037	115,806,097	120,894,392	125,619,073	125,235,961	125,074,556
Other	5,499,582	5,526,468	5,861,934	6,056,224	6,312,333	6,482,723
Total	526,418,185	566,552,048	579,321,391	594,002,548	612,585,149	620,687,368

Percentage of Revenue From Ultimate Customers

	1998	1999	2000	2001	2002	2003
Residential	43.14%	42.84%	43.24%	42.32%	42.97%	44.13%
Commercial	35.69%	35.74%	34.88%	35.52%	35.55%	34.68%
Industrial	20.12%	20.44%	20.87%	21.15%	20.44%	20.15%
Other	1.04%	0.98%	1.01%	1.02%	1.03%	1.04%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 2-7



Sales to Ultimate Customers by Customer Class (kWh)

	1998	1999	2000	2001	2002	2003
Residential	1,951,303,712	1,993,990,616	2,034,714,985	2,009,278,870	2,046,101,168	2,128,701,848
Commercial	1,853,216,919	1,897,409,767	1,900,823,062	1,920,846,814	1,943,752,256	1,911,511,710
Industrial	1,514,355,515	1,593,169,050	1,652,162,500	1,611,750,379	1,592,436,197	1,561,371,381
Other	38,929,921	38,650,293	40,504,752	41,181,682	41,575,991	41,504,526
Total	5,357,806,067	5,523,219,726	5,628,205,299	5,583,057,745	5,623,865,612	5,643,089,465

Percentage of Sales to Ultimate Customers

	1998	1999	2000	2001	2002	2003
Residential	36.42%	36.10%	36.15%	35.99%	36.38%	37.72%
Commercial	34.59%	34.35%	33.77%	34.40%	34.56%	33.87%
Industrial	28.26%	28.84%	29.36%	28.87%	28.32%	27.67%
Other	0.73%	0.70%	0.72%	0.74%	0.74%	0.74%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Annual Reports

Table 2-8

Vermont's Electrical Energy by Source (GWh) 1980-2003

(including Energy for Export)

	NYPA	Instate Hydro	Vermont Yankee	Hydro Quebec	Other Purchases	Other Wood	Instate Thermal	Exports	Total	Own Usage
1980	883	349	1,354	287	1,637		109	510	4,619	4,109
1981	885	443	1,689	527	1,308		76	666	4,928	4,262
1982	894	364	2,248	194	1,485		108	991	5,292	4,301
1983	896	436	1,555	191	2,035		102	804	5,215	4,411
1984	898	418	1,805	227	1,966	195	96	1,002	5,605	4,603
1985	925	393	1,621	595	1,874	280	47	982	5,735	4,753
1986	943	464	1,128	1,425	1,809	85	16	989	5,869	4,881
1987	761	454	1,928	1,840	1,515	156	23	1,585	6,677	5,092
1988	613	429	1,892	1,685	1,737	91	65	1,143	6,511	5,368
1989	625	547	1,384	1,634	1,962	189	42	877	6,383	5,506
1990	366	749	1,470	1,527	1,676	160	27	549	5,976	5,426
1991	348	590	1,448	1,090	1,866	205	35	114	5,582	5,469
1992	208	519	1,448	1,371	1,979	125	13	123	5,662	5,539
1993	132	594	1,462	1,588	1,717	247	10	126	5,750	5,624
1994	107	607	1,863	1,624	1,338	216	11	122	5,766	5,644
1995	95	573	1,700	2,287	1,112	244	12	124	6,023	5,899
1996	75	741	1,800	2,254	1,091	215	37	123	6,213	6,090
1997	82	666	2,108	2,184	961	243	13	212	6,257	6,045
1998	93	644	1,560	1,432	1,608	313	63	133	5,713	5,580
1999	82	554	1,985	2,261	691	322	42	136	5,937	5,801
2000	72	565	2,163	2,144	709	364	75	125	6,093	5,968
2001	90	428	2,140	2,159	854	277	44	125	5,993	5,868
2002	69	558	1,994	1,938	1,034	281	24	124	6,022	5,898
2003	73	554	2,131	1,694	1,226	297	34	125	6,134	6,009

Notes

1. "Instate Hydro" includes both utility owned and independent producers.
2. "Other Wood" is McNeil generation (both wood and gas) prior to 1991. After 1991, independent wood producers included.
3. After 1991, after 1997, and again in mid 1999, data sources changed. Data may not be directly comparable.
4. Through 1991, "Exports" represent wholesale transactions between Vermont and NEPOOL. Beginning in 1992, "Exports" are only the wholesale sales to CVPS' New Hampshire subsidiary.
5. Beginning in mid 1999 Totals were taken from Utukuty annual reports.

Source: VELCO, Annual Reports and DPS Economics Division

Figure 2-3 Vermont Gross and Net Electric Energy 1980 – 2003

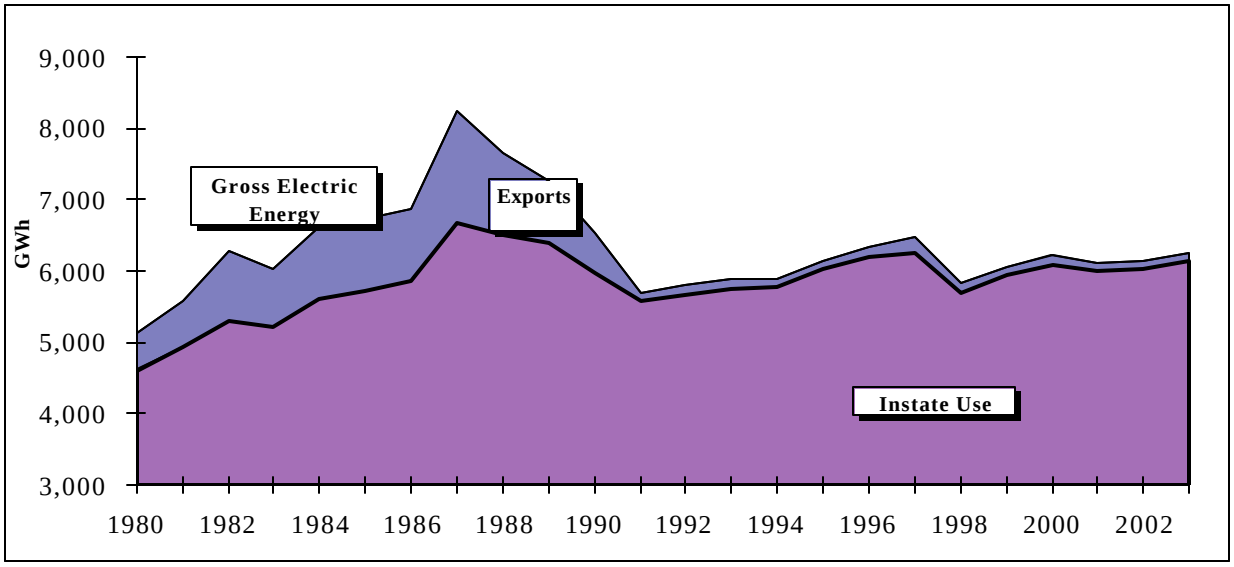


Figure 2-4 Vermont Gross Electric Energy by Source 1980-2003 (Including Energy for Export)

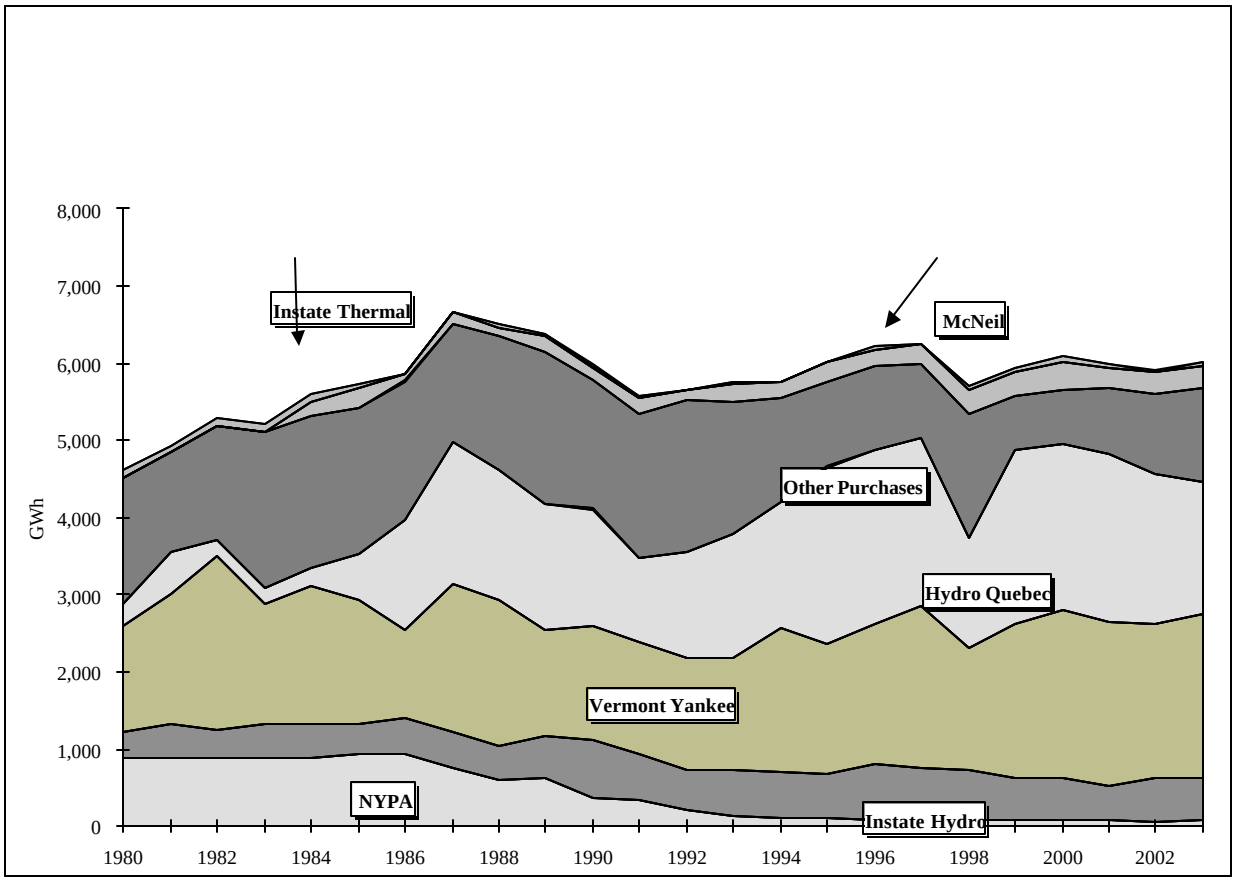


Figure 2-5 Vermont Electric Utilities: Seasonal Peak Load MWs 1980 – 2004

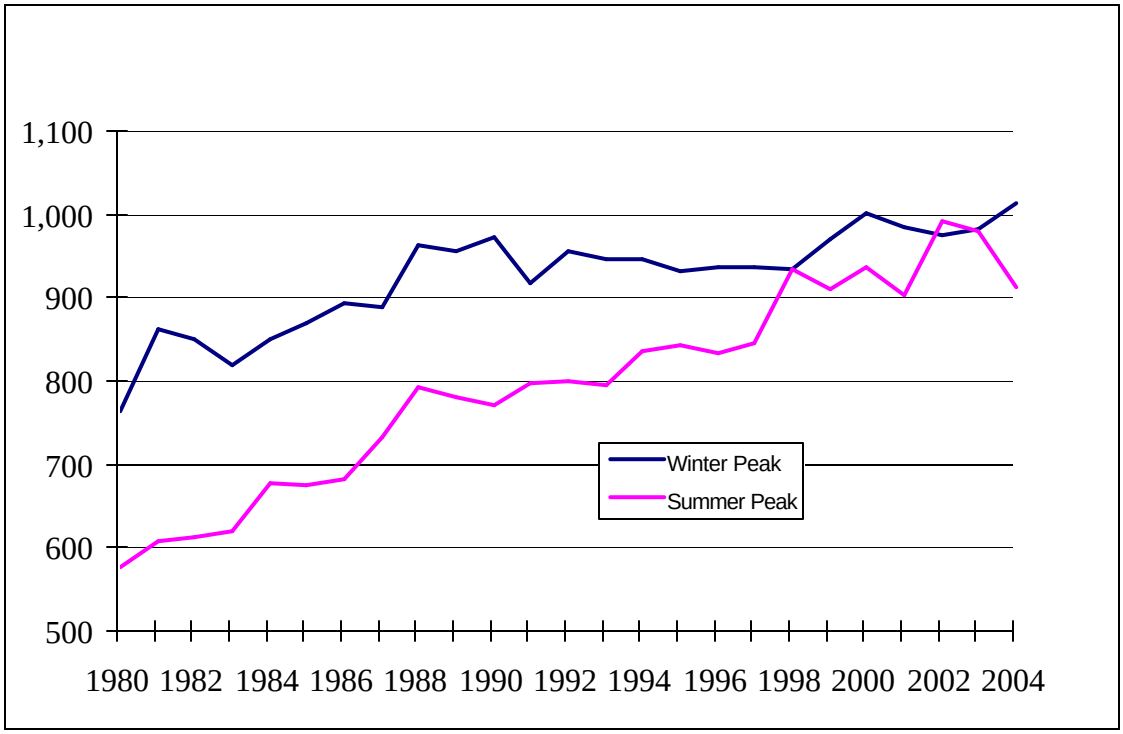


Figure 2-6 Vermont Electric Utilities: Annual Load Factor and Annual Sales 1980- 2004

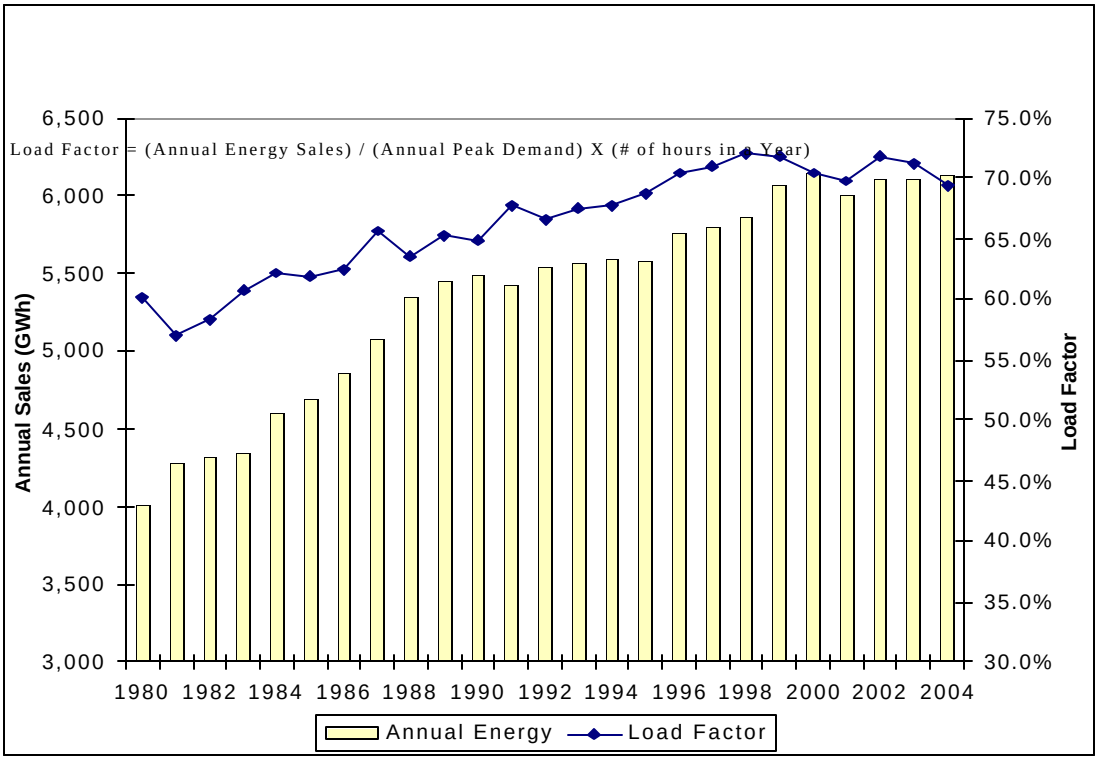
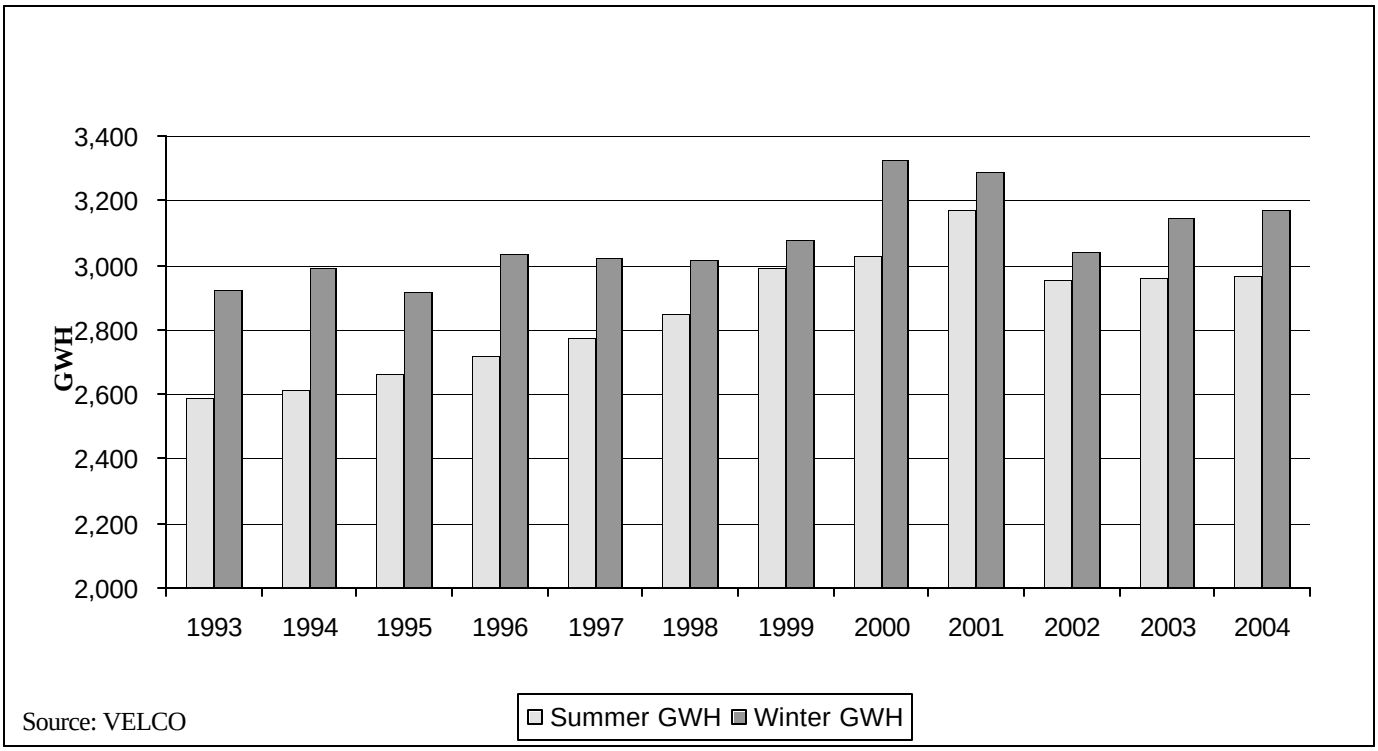


Figure 2-7 Vermont Electric Utilities - GWH by Power Period 1993 -2004



Source: VELCO

F. Reliability

Transmission

The Engineering Division focuses on the reliability of facilities that deliver electricity to Vermont consumers. Of special interest are the steps taken by the Vermont Electric Power Company (VELCO) to provide reliable transmission of bulk power in Vermont.

To address problems that could arise from the loss of critical components, VELCO has undertaken a study of the consequences of major contingencies - outages to critical facilities - to identify steps that could be taken in the event of a catastrophic loss of a major piece of equipment. As a result, VELCO has plans in place to rapidly respond to such unplanned, major contingencies.

VELCO has also undertaken significant capital upgrades in the past several years to serve growing electric load in Vermont. These upgrades include increasing the voltage of a major transmission line between Cavendish and West Rutland, and installing capacitors and new transformers in critical substations. Of particular note is the installation in Essex of a static compensator - a complex solid state device that provides critical voltage support to the transmission system in the event of an unexpected loss of a transmission line.

Over the past two years, VELCO has focused much of its planning efforts on the delivery of power to northwest Vermont, the region of the state experiencing the fastest growth in electric load. VELCO has also undertaken significant capital upgrades in the past several years to serve growing electric load in Vermont. These upgrades include increasing the voltage of a major transmission line between Cavendish and West Rutland, installing capacitors and new transformers in critical

Over the past two years, VELCO has focused much of its planning efforts on the delivery of power to northwest Vermont, the region of the state experiencing the fastest growth in electric load. VELCO has also undertaken significant capital upgrades in the past several years to serve growing electric load in Vermont. These upgrades include increasing the voltage of a major transmission line between Cavendish and West Rutland, installing capacitors and new transformers in critical substations, integrating portions of the Vermont Electric Cooperative transmission system into the VELCO system, and installing in Essex a static compensator - a complex solid state device that provides critical voltage support to the transmission system in the event of an unexpected loss of a transmission line.

Over the past several years, VELCO has also focused much of its planning efforts on the delivery of power to northwest Vermont, the region of the state experiencing the fastest growth in electric load. VELCO studies indicate that as load continues to grow, significant transmission upgrades are required, including new transmission lines along existing corridors between West Rutland and New Haven, and between New Haven and South Burlington. VELCO has applied to the Public Service Board for authority to construct these upgrades. A decision from the Board is expected in January 2005.

VELCO, together with the Burlington Electric Department and Green Mountain Power Corporation, are also evaluating options to address reliability concerns within the Chittenden County area as loads continue to grow. Among these options are upgrades to existing lines, the addition of new, higher voltage lines within existing corridors, conservation, and strategically placed generation. The Department closely monitors these developments and is collaborating with Burlington Electric Department and Green Mountain Power Corporation, using distributed utility planning methods, to ensure that the plans developed to reliably serve growing loads in Chittenden County will be the least-cost solution available.

Distribution

Reliable delivery of electricity by the various electric distribution systems in Vermont is critical to the safety, health, and economic well-being of Vermonters. As part of its ongoing efforts to improve Vermont's electric system reliability, the Department has worked closely with the state=s electric utilities to develop uniform statewide standards for electric system reliability measurement and reporting. Uniform measurement and reporting allows for the evaluation of reliability trends, enhances meaningful comparisons of reliability among utilities, and provides information valuable for the design and subsequent assessment of system upgrades and corrective measures. The Legislative Committee on Administrative Rules codified this effort when it approved Public Service Board Rule No. 4.900 - Electricity Outage Reporting. Calendar year 2001 was the first year for Vermont=s electric distribution utilities to report their reliability performance under the uniform methods prescribed in Public Service Board Rule No. 4.900.

As part of its effort to establish electric utility service quality and reliability plans (SQRP), the Department has worked with the electric utilities to set minimum expected reliability goals. These reliability goals are set for a given calendar year and measured using Public Service Board Rule No. 4.900 prescriptions.

G. Supply Sources .

Vermont loads are met through owned or contracted reserves and participation in the ISO New England wholesale electricity market.[9] The ISO market is a residual wholesale market meaning, that to the extent that a participant in the

[9] ISO New England is a "day-ahead - hourly" marketplace. This means that wholesale electricity suppliers and generators will bid their resources into the market the day before and submit separate bids for each resource for each hour of the day. The bids are stacked in dollar terms from lowest to highest matching the expected hourly demand forecast for that hour and each hour in the next day. The ISO Operations staff will then determine the least cost dispatch sequence for the next day, which reflects the actual bids. Generators will then be dispatched to match the actual load occurring on the system. The highest bid resource that was dispatched to meet actual load sets the Amarket clearing price@ for electricity. This is the price that will be paid to all suppliers by buyers who purchase power from the residua market. The competitiveness of the market is driven by the fact that if a supplier bids too high price for their resources, then the unit generator is not dispatched and the supplier receives no revenue. This encourages the supplier to bid the most competitive prices in order to compete for dispatch in the

marketplace produces electricity in excess of the demand of its customers, it can sell the excess into the wholesale market to other participants. Vermont's committed supply sources are a mix of fuel types, sizes, operating cycles, contracts, and owned units, these units are all bid into the wholesale market. Table 2.8 and Figures 2.3 and 2.4 show sources of energy purchased and produced by Vermont electric utilities for their customers.

Through 2004, Vermont received about one third of its energy from nuclear sources. The majority of this comes from the Vermont Yankee Nuclear Station, with the remainder from three other nuclear stations in New England, two of which have permanently ceased operation within the last four years. Vermonters are still receiving a small amount of energy from the Millstone 3 Nuclear Plant in Connecticut. Under orders issued by the FERC, Vermonters continue to pay the closure costs for recently closed nuclear plants (Maine Yankee and Connecticut Yankee) as well as Yankee-Rowe, which closed in 1991.

A significant portion of instate generation comes from renewable resources, including utility owned hydro sites and the wood-fired McNeil Station, plus independent power produces using hydro, wind, landfill gas, and wood. Vermont has contracted with Independent Power Producers that meet the criteria under federal law, the Public Utility Regulatory Policies Act (PURPA), for Qualifying Facilities (QFs). QFs must produce electricity using renewable resources or they must cogenerate. The Vermont Electric Power Producers, Inc. (VEPPI) is designated by the PSB as the agent for the QFs, to aggregate the electrical output, and allocate it to Vermont utilities. Table 2.9 summarizes the current status of Vermont's QFs that are selling power to the state's utilities through VEPPI.

Table 2-9

Vermont's Qualifying Facilities, 2003-2004

2003

	No of facilities	MW	MWH (Energy)	Revenue ($ Million)	Settlement Refund	Average NetRate (cents/kWh)
Hydro	19	54.1	169,066	$20.33	$0.46	$11.75
Wood	1	20.3	171,063	$20.10	$0.43	$11.50

2004

	No of facilities	MW	MWH (Energy)	Revenue ($ Million)	Settlement Refund	Average NetRate (cents/kWh)
Hydro	19	54.1	178,879	$20.82	$0.47	$11.38
Wood	1	20.3	163,109	$18.87	$0.42	$11.31

Source: DPS Planning Division

wholesale marketplace at http://www.iso-ne.com/about_the_iso.

Vermont Yankee Nuclear Power Station

Vermont Yankee (VY) began generating commercially in 1972 and is licensed to operate until 2012. It is a 540 MW boiling water reactor (BWR) and is located in Vernon, Vermont. VY has generated an average of more than 3.8 billion kWh annually, achieving a cumulative average output of almost 80% of its maximum potential over its 32 year operating history. Prior to the sale to Entergy, the rolling three-year average cost of Vermont Yankee power was 4.41 cents per kWh (Aug 1999 through July 2002).

Sale of Vermont Yankee

The sale of Vermont Yankee to Entergy Nuclear Vermont Yankee, LLC, in 2002 is reported in Section 2.B above. Prior to 2002, VY was owned by Vermont Yankee Nuclear Power Corporation (VYNPC), a single asset entity owned in turn by eight New England utilities. Vermont utilities owned 55% of VYNPC. In 2002, the plant was sold to Entergy Nuclear Vermont Yankee, LLC, a subsidiary of Entergy Corporation of New Orleans, Louisiana. Entergy is the second largest nuclear generator in the United States, owning ten nuclear plants, five in the South and five in the Northeast. Entergy brings to VY significantly greater resources and nuclear expertise than its former owners.

As part of the sale, Vermont Yankee became a merchant plant, selling the same percentage of power to Vermont Utilities at fixed prices through a power purchase agreement. In 2003 and 2004, the power prices were 4.2 and 4.28 cents per KWh, respectively. In 2005, the power price will be 3.95 cents per KWh. While market prices have been higher than these fixed power prices, if market prices drop significantly lower than the fixed prices, the price paid by GMP and CVPS will decline proportionately. The sale also removes from Vermont utilities and their ratepayers the risks of premature failure of the plant and the cost uncertainties of decommissioning the plant. These costs will be paid by Entergy. Vermont utilities remain subject to the risk of interruptions in operations of the plant, since the contract provides energy to GMP and CVPS only if the plant actually operates. Should that happen, GMP and CVPS will need to find other supplies.

The sale evaluation considered the option of premature closure of Vermont Yankee and determined the sale provided the most benefits to ratepayers. Operation or closure of Vermont Yankee will now be a direct result of market forces and Entergy's business decisions. The Department continues to monitor the value of the Vermont Yankee decommissioning trust fund, which was transferred to Entergy as part of the sale. At the end of this reporting period, the value of the fund was $358 million.

Uprate of Generating Capacity

In 2003, Entergy petitioned the Public Service Board (PSB) and the Nuclear Regulatory Commission (NRC) for an increase in generation, known as a "power uprate," at the plant by about 20%, from 510 MW to 620 MW. In March of 2004, the PSB conditionally granted that request, subject to an independent engineering assessment of the plant. During its Spring 2004 refueling outage, Entergy implemented physical modifications to the plant for power uprate, including a new high-pressure turbine, new feedwater heaters, a refurbished main generator, and other modifications. A decision by the Nuclear Regulatory Commission (NRC) regarding the power uprate is expected in 2005.

As part of the proceeding before the PSB, Entergy agreed to a revenue sharing provision related to its sales of uprate power, and as such the DPS agreed that the power uprate proposal was an economic benefit to the state of Vermont. Entergy also agree to a ratepayer protection plan to compensate Vermont Utilities for outages and power reductions caused by power uprate.

DPS is concerned about one aspect of power uprate - claiming credit for pressure developed inside the reactor containment on accidents and transients to demonstrate the adequacy of operation of emergency core cooling pumps. DPS has secured a hearing before the NRC Atomic Safety and Licensing Board in order pursue answers to its concerns. The hearing process is ongoing at the end of this reporting period.

Nuclear Waste Storage

Vermont continued as a member of the Texas Low-Level Radioactive Waste Compact, in which Texas is obligated to develop a disposal facility within its state. During this reporting period, the state of Maine, which was originally part of the Texas Compact, voted to remove itself. In 2003, the Texas legislature enacted legislation to establish a siting process there, and in July 2004, Waste Control Specialists, a private developer, submitted an application to construct a compact facility in Andrews County, Texas. The process provides for the issuance of a license by the end of 2007.

Removal and ultimate disposal of spent nuclear fuel from the Vermont Yankee site remains a continuing concern. The U.S. Department of Energy (DOE) was contractually responsible to begin removal of spent fuel from nuclear plant sites in 1998 and has been found in breach of contract by the U.S. Court of Claims. Litigation for damages is continuing. VY has sufficient fuel pool storage capacity to accommodate spent fuel until the year 2007, assuming it receives the requested power uprate. It is expected that VY will request state approval for dry cask storage in 2005. DPS continues to work in support of efforts to encourage the federal government to fulfill its obligation to remove spent fuel from the Vermont Yankee site.

Other Nuclear Power Stations

Four other nuclear power stations provide or have provided power to Vermont. Yankee Rowe Nuclear Power Station, located three miles south of the Vermont-Massachusetts border, was closed permanently in 1991. Decommissioning is complete, but spent nuclear fuel must remain on-site since the U.S. DOE refuses to remove spent fuel despite its contractual obligation to do so. Yankee-Rowe has moved all its nuclear fuel into dry cask storage. Final scheduled decommissioning payments ended in June 2000, but in 2003 addition payments were established for the ongoing costs of dry cask storage..

Connecticut Yankee closed in December, 1996, and Maine Yankee closed in August, 1997. Maine Yankee is substantially completed with decommissioning and has moved all its spent fuel into dry cask storage. Connecticut Yankee is in the process of decommissioning. Both plants sought significant increases in 2004 in decommissioning collections to manage dry cask storage. Vermonters continue to pay these costs for managing fuel at the closed nuclear plants.

Central Vermont Public Service (CVPS) has a small share (1.7303%) in Northeast Utilities' (NU's) Millstone 3 nuclear plant. In 2001, the majority owners of Millstone 3 sold their shares to Dominion Resources, Inc. CVPS elected not to sell its share of Millstone 3 and therefore continues in its ownership.

Coal Oil and Gas

In addition to an ample supply of oil fired peaking facilities scattered throughout the state, Vermont utilities own shares of the Yarmouth 4 unit in Maine and the Stony Brook facility in Massachusetts. Vermont utilities have regularly purchased shorter-term contracts with other oil and gas fired units in New England. The advent of retail competition and the establishment of wholesale competition has sparked a flurry of power station construction and proposals - fueled by natural gas - in New England. These gas power systems are far more efficient than the average of the existing fleet. Vermont consumers have access to these sources through the ISO New England market.

Coal

Vermont utilities' contract with the coal fired Merrimack II unit ended in 1998.

Hydro-Québec

In 1990 the PSB approved a 30 year agreement between a group of eight Vermont utilities, known as the VJO, to purchase additional long term baseload power from HQ and to make it available at wholesale to the rest of Vermont's utilities. This HQ/VJO contract provided for increasing purchases of power from 51 MW in 1994 to approximately 310 MW in 2001 as

shown in Table 2-8. Part of this power was to replace a 150 MW contract with the DPS and other medium term contracts signed between Vermont utilities and HQ in the 1980s. The remainder was intended to cover expected load growth. The contract requires the VJO to take energy at an annual capacity factor of 75%. Its capacity cost, based on the projected carrying cost of a new coal unit, remains fixed for each 20 year contract schedule, once delivery begins under that schedule. This contract is a "take or pay" arrangement, meaning that regardless of whether the Vermont utilities have the need for the power for which they have contracted, they must still pay for it. (Wholesale power markets provide Vermont utilities the opportunity to resell excess HQ power.) Currently the average cost of the HQ/VJO power is about 6.5 cents/kWh, which puts it somewhat above the cost of market alternatives in 2004. HQ/JVO power is stably priced, immune to escalating fuel prices and retrofit costs, and does not contribute to the air quality problems of our region.

Other Power Contracts

In addition to contracts with HQ, Vermont utilities have a variety of short and medium-term contracts with neighboring utilities within NEPOOL and New York, shown in Table 2-8 under "Other Purchases." Vermont utilities are also involved in various types of sales with the region. Figure 2-3 shows a breakdown of instate use and sales or exports of power produced in Vermont.

Hydro

Vermont has 46 utility owned hydro sites and approximately 35 independently owned hydro sites that produce about 10% of its electric energy. All hydro facilities of significant size are licensed by the FERC. Periodically these plants have to renew their licenses. Generally, the re-licensing process results in permit conditions that require owners of these plants to sacrifice some operating flexibility and production in order to mitigate the environmental impacts of their facilities. For some hydro facilities, this has resulted in a 10-20% loss of energy production. Recently CVPS has agreed to remove a damn and restore the riverine environment as part of a re-licensing settlement

Purchase of Hydroelectric Facilities

The State of Vermont has been investigating acquiring an interest in hydroelectric facilities along the Connecticut and Deerfield Rivers in Vermont, New Hampshire and Massachusetts since 2003. Recently the Vermont Hydroelectric Power Authority ("VHPA") determined that it would not bid with its partners on the hydroelectric system. The system has been sold to TransCanada Hydro NE.

USGen New England, Inc., a subsidiary of PG&E National Energy Group, purchased all of the electric generation assets of New England Power ("NEP") in 1998 for approximately $1.6 billion. The electric generation plants in that sale included the hydroelectric plants on the Connecticut and Deerfield Rivers and three fossil-fuel plants in Massachusetts and Rhode Island. Some Vermonters saw that sale as a missed opportunity for the State to acquire the hydroelectric assets along the Connecticut and Deerfield Rivers in Vermont, New Hampshire and Massachusetts.

The legislative session that began in January 2003 brought with it rumors that the USGen New England hydroelectric facilities were for sale. Some investigation by the Department of Public Service found that indeed USGen had been soliciting interest, but was looking to make a private stock sale of the company, and that it would include all assets and liabilities, including the fossil-fuel fired plants in Massachusetts and Rhode Island and their associated liabilities. USGen stated that it had no plan to offer individual or groups of assets for sale, nor were bids being considered on pieces of the business, such as just the hydro plants.

USGen filed for Chapter 11 bankruptcy protection on July 8, 2003, thus stopping any ongoing negotiations for the company's sale. The Department of Public Service intervened in the Bankruptcy Court to monitor the proceedings and preserve any options for the State to participate in a bankruptcy auction. (Bankruptcy counsel continued to monitoring the proceedings for their duration.) The bankruptcy also stopped any talks to sell the facilities in which USGen was engaged.

Prior to the bankruptcy filing, language was enacted creating the Vermont Renewable Power Supply Acquisition Authority ("VRPSAA") in the 2003 Capital Construction Bill, which was signed and effective on June 11, 2003. (Act 63, Section 38, 2003.) The VRPSAA was given the charge to conduct two studies: one addressing "the financial and technical issues involved in a purchase of the hydroelectric dams on the Connecticut and Deerfield Rivers," and a second studying "the principal policy issues implicated by such a purchase, if it were authorized ..." The VRPSAA's members were: Michael K. Smith, Chair, State Treasurer Jeb Spaulding, Senators Vincent Illuzzi and Ann Cummings, Representatives Robert Wood and William Johnson, Public Service Commissioner David O'Brien and Richard Mallary (appointed by the Public Service Board). Two public presentations were prepared and submitted by the VRPSAA to the General Assembly on December 1, 2003. They are available at http://www.leg.state.vt.us/reports/04power/power.htm.

After substantial study and investigation, the VRPSAA voted unanimously to investigate a public/private collaboration. The VRPSAA investigated which commercial entities interested in the facilities would be interested in a collaborative venture. The result was a collaboration between VRPSAA and Brascan and Emera, (two Canadian companies)

The 2004 General Assembly took the next step necessary to move the process forward and created the VHPA, an entity with the powers to issue bonds, and to own, operate and manage any interest the VHPA may acquire in the facilities. (The VRPSAA did not have these powers.) Governor Douglas appointed a Board of Directors on August 17, 2004. By statute it included the State Treasurer, Jeb Spaulding and an appointment by the Public Service Commission, who took the seat himself. The Governor appointed four of the five remaining seats: Brad Aldrich, Nancy Brock, Richard Mallary, and Fred Tiballi. The first Board meeting took place on September 27, 2004 at which time Brad Aldrich was elected Chair, and Jeb Spaulding Vice Chair. A fifth seat remains unfilled.

The United States Bankruptcy Court for the Southern District of Maryland conducted a public auction for the assets in December 2004, with a starting bid by TranCanada Hydro NE of $505 million. After a detailed analysis, the VHPA decided not to bid against the TransCanada bid, and in fact no other entity submitted a bid. The Bankruptcy Court has approved the sale to TransCanada, and closing should take place in the 3rd quarter of 2005 or 1st quarter of 2006.

Wind Power

In late 1997, Green Mountain Power (GMP) commissioned the first utility-owned, commercial scale, wind generating facility in the U.S. GMP received grants from U.S. DOE and the Electric Power Research Institute (EPRI) to support this work. The facility, located in Searsburg, Vermont, consists of 11 wind turbines with combined capacity of 6 MW. The relative ease of siting these machines is attributed to GMP's extensive advance work with the community. This project has been a catalyst for further wind power development in New England. Recent estimates suggest that Vermont has the wind potential to satisfy as much as 10% of the state's electricity needs. The DPS issued a report in 1993 on wind power potential in Vermont and the wind industry based here.

Additional potential wind projects include:

Searsburg Expansion - EnXco, Inc is discussing a project that would expand the current installation at Searsburg. It would likely involve turbines on two adjacent ridgelines and would be approximately 30 MW of installed capacity.

Equinox Mountain - Meteorological testing (MET) towers have been permitted and installed on Equinox Mountain in Manchester. If completed this project would have a potential capacity of 7 MW.

Glebe Mountain - This project is being proposed by Catamount Energy and would involve 20 - 40 MW of turbines placed along the ridgeline of Glebe Mountain.

Lowell Mountain - In 2003, enXco received a permit to install two MET towers on Lowell Mountain in Lowell, VT.

East Mountain - The proposed four wind turbines would be located on the site of a former US Army radar station on East Mountain. If installed these turbines would have generation capacity of 6MW. This project is an active Docket before the Public Service Board

Biomass/Wood

Vermont has over 70 MW of generating capacity from wood. The Burlington Electric Department McNeil Station is the largest (53 MW) utility-owned wood-fired generator in the U.S. It is an important instate generating source that creates a market for low grade wood and helps to insulate the state from volatility in prices and availability of other energy sources. It is also important for electric system reliability in Chittenden County.

In 1994, the McNeil joint owners, collaborating with a developer of innovative wood gasification technology, won a $9.2 million grant from U.S. DOE to demonstrate this technology at McNeil. An experimental gasifier has been built at the McNeil Station. Gasification is a process that converts low quality feedstock into high quality fuel. It is scaled to produce 20 MW but is not a commercial model. Testing of the gasifier began in earnest in mid-1998. This generation of gasifiers is expected to provide very high levels of efficiency, making wood, and biomass generally, a very viable fuel choice worldwide.

Ryegate Power Station produces 20 MW of power from wood. This privately owned, non-utility generation plant has been in operation since 1992. The public's increasing awareness of environmental impacts and degradation that result from fossil fuel generation make biomass fuels and generation plants like McNeil and Ryegate more attractive. (See Table 2.8 above; Ryegate is the state's QF that uses wood.)

Several facilities in Vermont have invested in wood energy systems. Camp Johnson (Vermont National Guard facility) has specified a modern wood chip-fired heating system. The Newport state office building will be heated by a modern wood chip system. The Montpelier wood-fired district energy system (Capitol complex) has installed an automated wood handling system.

Vermont Department of Forests, Parks & Recreation, a partner in the VT Biomass Energy Program with DPS, monitors forest harvest and the production of wood fuel on an annual basis as part of an effort to follow trends in sustainable forest use and status. This activity, combined with a periodic federal forest inventory of the state, provides a good picture of the present state of wood availability.

Methane Sources

When solid waste is disposed of at landfills, it decomposes into landfill gases that include methane, a flammable gas. Vermont has two landfill methane generating stations, located in Burlington and Brattleboro that convert this potent greenhouse gas into electricity. A third generation site is being developed by Washington Electric Cooperative, sited in Coventry.

Methane is also emitted from volatile solids or animal waste. Four Vermont farms have installed or are in the process of installing anaerobic digesters to produce electricity from the methane recovered from cow manure. In addition to producing energy and reducing the amount of methane emitted into the atmosphere, this process also reduces water pollution and produces a high quality fertilizer as a co-product

H. Demand Side Management

Electric Utility DSM Programs

For the reporting period ending December 31, 2003, Efficiency Vermont (EVT), Burlington Electric Department (BED) and Vermont electric utilities disclose spending about $139 million for DSM programs since 1991. These programs have

reduced Vermont=s annual electric use by 466,769 MWh or about 7.5%. Savings from these programs have been achieved at an average utility cost of 3.0 cents/kWh, considerably less than today=s average market price for electricity.

Table 2-10

Efficiency Vermont and Electric Utility DSM Programs: Costs and Savings 2000 - 2001

	2000			2001		
	Utility Cost	MWh Savings	Peak kW Savings	Utility Cost	MWh Savings	Peak kW Savings
BED	$632,525	2,767	377	$770,222	2,702	347
CVPS	$724,655	2,250	559	no report	------	-----
CUC	$1,103,760	2,211	439	$489,400	551	103
GMP	$189,576	445	148	no report	------	------
WEC	$85,188	215	52	$193,683	200	49
VEC	$247,189	550	101	$149,594	374	83
VPPSA Systems	$21,522	211	81	$17,378	177	97
Efficiency Vermont	$5,598,458	20,081	4,770	$8,802,654	32,041	5,681
TOTAL	**$8,605,421**	**28,760**	**6,527**	**$ 10,422,937**	**36,054**	**6,408**

	2002			2003		
	Utility Cost	MWh Savings	Peak kW Savings	Utility Cost	MWh Savings	Peak kW Savings
BED	$946,183	3,789	379	$907,735	2,862	296
CVPS						
CUC	$214,639	119	25			
GMP						
WEC						
VEC	$99,962	265	56			
VPPSA Systems						
Efficiency Vermont	$10,982,382	34,648	6,539	$12,957,903	43,833	6,632
TOTAL	**$12,243,166**	**38,821**	**6,999**	**$13,865,638**	**46,695**	**6,928**

As reflected in Table 2-10, in early 2000 a statewide energy efficiency utility, Efficiency Vermont (EVT), started providing statewide energy efficiency programs on behalf of most Vermont electric utilities, operating under contract to the Vermont Public Service Board. EVT's programs and services are funded by an energy efficiency charge (EEC) appearing on electric customers monthly bills. More information about the EEC can be found elsewhere in this report. For further information about Efficiency Vermont's programs and services, call Efficiency Vermont toll-free at 1-888-921-5990 or visit their Web site at www.efficiencyvermont.com.

Figure 2-8 Electric Efficiency Programs - Cost & Result

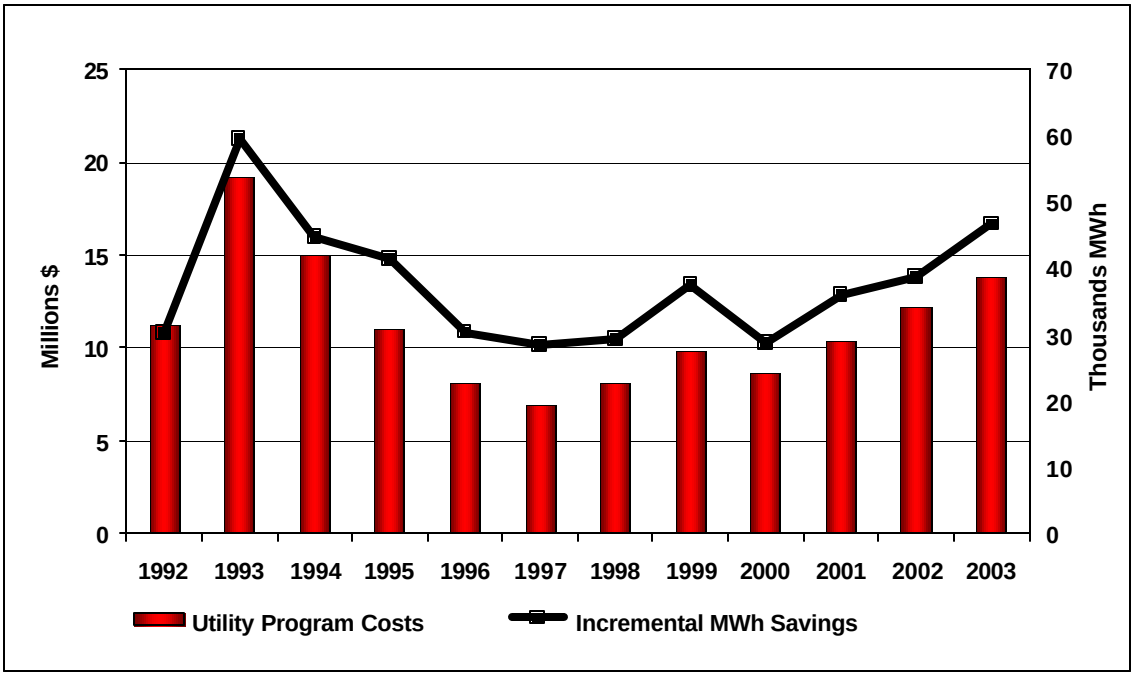


Table 2-11Vermont Electric Utilities: Condensed Operating Statements

2003

	Total Revenues	Operation Expenses	Maintenance Expenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Total Other Income & Deductions	Net Interest Charges	Net Income
								(DOLLARS)							
Private															
CVPS	306,111,210	219,400,748	16,624,669	14,994,147	935,558	283,716	17,466,735	8,000,263	3,019,500	280,725,336	25,385,874	6,384,139	877,756	11,091,319	19,800,938
Citizens	34,083,468	31,105,582	1,107,798	2,760,962	0	0	1,558,048	-1,062,177	-151,491	35,318,722	-1,235,254	7,963	494,588	-17,226	-1,704,653
GMP	280,470,227	228,624,591	10,194,600	10,280,279	3,522,253	0	7,422,409	5,402,237	-282,400	265,163,969	15,306,258	2,368,804	210,462	7,057,040	10,407,560
Rochester	925,629	682,160	19,743	37,629	15,172	0	27,889	250	0	782,843	142,786	15,081	0	160	157,707
VMCO	19,495,814	12,277,389	1,191,948	1,145,682	0	0	310,882	303,714	0	15,229,615	4,266,199	0	0	0	4,266,199
Subtotal	641,086,348	492,090,470	29,138,758	29,218,699	4,472,983	283,716	26,785,963	12,644,287	2,585,609	597,220,485	43,865,863	8,775,987	1,582,806	18,131,293	32,927,751
Municipal															
Barton	2,074,921	1,444,606	83,304	174,978	1,284	0	111,470	0	0	1,815,642	259,279	11,163	0	215,465	54,977
BED	39,811,303	29,103,595	2,242,041	3,792,025	31,118	522,186	1,795,900	0	0	37,486,865	2,324,438	945,144	6,435	5,067,521	-1,804,374
Enosburg	2,881,762	2,216,725	145,823	239,815	83,935	0	70,322	0	0	2,756,620	125,142	468,754	0	111,795	482,101
Hardwick	3,815,247	3,063,830	263,241	196,239	11,517	0	246,828	0	0	3,781,655	33,592	20,551	0	148,749	-94,606
Hyde Park	1,278,451	1,115,945	65,955	74,315	0	0	49,227	0	0	1,305,442	-26,991	13,950	1,375	3,900	-15,566
Jacksonville	611,929	643,800	0	20,496	0	0	58,127	0	0	722,423	-110,494	4,792	0	9,596	-115,298
Johnson	1,285,581	1,276,585	81,509	57,503	0	0	116,841	0	0	1,532,438	-246,857	29,143	0	367	-218,081
Ludlow	4,805,650	4,481,281	132,464	284,775	0	0	145,637	0	0	5,044,157	-238,507	52,588	0	10,377	-196,296
Lyndonville	6,877,095	5,511,952	961,367	347,786	102,812	0	312,054	0	0	7,235,971	-358,876	121,285	0	10,091	-247,682
Morrisville	4,981,089	4,808,031	252,544	484,953	0	0	199,591	0	0	5,745,119	-764,030	131,577	0	147,068	-779,521
Northfield	3,097,400	2,697,544	42,719	110,882	2,909	0	88,665	0	0	2,942,719	154,681	15,173	0	51,347	118,507
Orleans	1,451,907	1,370,200	36,874	63,957	0	0	38,284	0	0	1,509,315	-57,408	8,350	0	9,309	-58,367
Readsboro	223,313	204,226	17,864	0	0	0	2,966	0	0	225,056	-1,743	1,522	0	197	-418
Stowe	6,924,187	6,624,746	92,363	251,683	2,863	0	146,655	0	0	7,118,310	-194,123	33,855	0	31,329	-191,597
Swanton	6,079,113	3,080,670	366,798	684,744	39,404	0	299,818	0	0	4,471,434	1,607,679	170,378	0	1,113,520	664,537
Subtotal	86,198,948	67,643,736	4,784,866	6,784,151	275,842	522,186	3,682,385	0	0	83,693,166	2,505,782	2,028,225	7,810	6,930,631	-2,401,684
Cooperatives															
VEC	20,391,471	14,384,373	1,834,629	1,571,157	0	0	202,532	0	0	17,992,691	2,398,780	66,860	121,248	1,538,708	805,684
WEC	10,682,560	7,729,726	804,289	1,049,658	0	0	123,831	0	0	9,707,504	975,056	134,685	34,297	853,361	222,083
Subtotal	31,074,031	22,114,099	2,638,918	2,620,815	0	0	326,363	0	0	27,700,195	3,373,836	201,545	155,545	2,392,069	1,027,767
Total	**758,359,327**	**581,848,305**	**36,562,542**	**38,623,665**	**4,748,825**	**805,902**	**30,794,711**	**12,644,287**	**2,585,609**	**708,613,846**	**49,745,481**	**11,005,757**	**1,746,161**	**27,453,993**	**31,553,834**
Vt. Yankee	187,123,325	186,400,883	0	0	0	0	20,380	960,549	-926,153	186,455,659	667,666	4,092,321	1,015,431	1,208,653	2,535,903
VELCO	23,626,966	8,061,428	4,272,199	2,482,111	13,450	0	3,262,305	2,841	-36	18,094,298	5,532,668	393,552	0	4,656,885	1,269,335

Source: Annual Reports

Table 2 -12 Vermont Electric Utilities: Condensed Operating Statements

2002

	Total Revenue	Operation Expenses	Maintenance Expenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Net Other Income & Deductions	Net Interest Charges	Net Income
							(DOLLARS)								
Private															
CVPS	294,512,386	207,321,330	17,057,231	14,966,584	1,499,901	283,716	14,671,802	9,374,830	2,618,254	267,793,648	26,718,738	7,291,095	2,571,742	11,670,878	19,767,213
Citizens	31,288,495	27,255,574	1,402,074	2,876,043	0	0	1,563,049	(1,694,908)	103,668	31,505,500	(217,005)	11,595	2,170,280	(10,195)	(2,365,495)
GMP	274,607,928	221,777,599	9,931,964	9,560,978	4,590,178	0	7,623,310	6,336,981	(294,108)	259,526,902	15,081,026	3,501,024	918,658	6,170,050	11,493,342
Rochester	899,708	733,509	25,388	44,149	19,114	0	27,749	250	0	850,159	49,549	18,557	0	412	67,694
VMCO	18,362,033	11,921,635	950,406	1,136,058	0	0	738,109	945,312	0	15,691,520	2,670,513	0	0	0	2,670,513
Subtotal	619,670,550	469,009,647	29,367,063	28,583,812	6,109,193	283,716	24,624,019	14,962,465	2,427,814	575,367,729	44,302,821	10,822,271	5,660,680	17,831,145	31,633,267
Municipal															
Barton	1,981,222	1,396,315	97,144	182,818	1,284	0	104,034	0	0	1,781,595	199,627	26,870	0	223,061	3,436
BED	39,685,094	27,503,691	2,222,889	2,413,866	93,565	246,148	1,712,373	0	0	34,192,532	5,492,562	1,814,237	43,625	4,780,374	2,482,800
Enosburg	2,647,347	2,080,265	138,343	239,623	84,740	0	53,533	0	0	2,596,504	50,843	45,088	0	130,835	(34,904)
Hardwick	3,670,003	2,593,973	259,701	235,152	12,866	0	234,229	0	0	3,335,921	334,082	13,202	0	162,495	184,789
Hyde Park	1,140,093	1,001,218	66,182	71,631	0	0	44,352	0	0	1,183,383	(43,290)	18,499	1,375	3,556	(26,972)
Jacksonville	605,478	556,120	0	20,496	0	0	34,915	0	0	611,531	(6,053)	108	0	0	(5,945)
Johnson	1,202,904	1,261,089	33,272	56,957	0	0	20,012	0	0	1,371,330	(168,426)	35,258	0	567	(133,735)
Ludlow	4,660,932	4,160,395	140,100	272,607	0	0	145,518	0	0	4,718,620	(57,688)	40,225	0	9,502	(26,965)
Lyndonville	6,736,937	5,993,078	329,198	333,699	102,836	0	291,530	0	0	7,050,341	(313,404)	410,322	0	12,050	84,868
Morrisville	4,968,436	4,209,633	342,690	475,159	0	0	175,507	0	0	5,202,989	(234,553)	110,713	0	150,872	(274,712)
Northfield	3,153,853	2,388,221	30,333	109,101	5,129	0	82,873	0	0	2,615,657	538,196	16,430	0	65,547	489,079
Orleans	1,577,013	1,479,727	21,877	57,564	0	0	37,125	0	0	1,596,293	(19,280)	14,730	0	9,014	(13,564)
Readsboro	214,333	182,597	25,507	0	0	0	2,940	0	0	211,044	3,289	897	0	173	4,013
Stowe	6,849,529	6,176,138	75,315	247,667	2,863	0	137,948	0	0	6,639,931	209,598	34,998	0	37,874	206,722
Swanton	6,221,974	2,978,411	351,526	620,624	39,404	0	317,387	0	0	4,307,352	1,914,622	132,827	0	1,200,378	847,071
Subtotal	85,315,148	63,960,871	4,134,077	5,336,964	342,687	246,148	3,394,276	0	0	77,415,023	7,900,125	2,714,404	45,000	6,786,298	3,785,981
Cooperatives															
VEC	18,754,674	13,600,451	1,520,904	1,466,986	0	0	185,876	0	0	16,774,217	1,980,457	620,731	276,505	1,607,877	716,806
WEC	10,188,594	7,048,715	988,402	1,034,932	0	0	122,326	0	0	9,194,375	994,219	143,333	31,256	826,994	279,302
Subtotal	28,943,268	20,649,166	2,509,306	2,501,918	0	0	308,202	0	0	25,968,592	2,974,676	764,064	307,761	2,434,871	996,108
Total	**733,928,966**	**553,619,684**	**36,010,446**	**36,422,694**	**6,451,880**	**529,864**	**28,326,497**	**14,962,465**	**2,427,814**	**678,751,344**	**55,177,622**	**14,300,739**	**6,013,441**	**27,052,314**	**36,415,356**
Vt. Yankee	175,722,400	130,356,283	12,022,468	13,129,201	11,846	928,749	5,674,608	(7,105,690)	3,749,370	158,766,835	16,955,565	4,175,877	6,275,969	5,401,690	9,453,783
VELCO	23,312,648	9,256,114	3,856,884	1,612,129	571,695	0	3,268,073	(342,820)	0	18,222,075	5,090,573	401,095	0	4,397,951	1,093,717

Source: Annual Reports

Table 2.13 Vermont Electric Utilities: Condensed Operating Statements

2001

	Total Revenues	Operation Expenses	Maintenance Expenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Total Other Income & Deductions	Net Interest Charges	Net Income
							(DOLLARS)								
Private															
CVPS	293,041,984	207,527,461	17,691,305	15,584,678	975,297	283,716	13,467,657	7,557,340	3,487,007	266,574,461	26,467,523	(3,495,334)	8,235,850	12,329,238	2,407,101
Citizens	29,337,594	27,643,931	1,480,618	2,831,523	0	0	1,531,289	(4,131,312)	(1,037,046)	28,319,003	1,018,591	(273,307)	7,911,853	(8,004)	(7,158,565)
GMP	283,463,808	230,187,125	8,039,516	9,831,587	4,462,671	0	7,535,886	5,318,224	1,629,724	267,004,733	16,459,075	2,722,462	530,406	7,039,738	11,611,393
Rochester	878,581	700,146	19,919	32,229	19,313	0	26,745	250	0	798,602	79,979	147,019	1,000	1,831	224,167
VMCO	17,388,297	12,266,435	929,008	1,110,795	0	0	673,695	115,000	0	15,094,933	2,293,364	0	0	0	2,293,364
Subtotal	624,110,264	478,325,098	28,160,366	29,390,812	5,457,281	283,716	23,235,272	8,859,502	4,079,685	577,791,732	46,318,532	(899,160)	16,679,109	19,362,803	9,377,460
Municipal															
Barton	1,934,072	1,442,455	82,541	183,322	1,284	0	100,386	0	0	1,809,988	124,084	78,859	0	231,884	(28,941)
BED	39,901,113	26,320,572	2,085,437	2,433,116	165,411	727,145	1,561,798	0	0	33,293,479	6,607,634	1,646,572	204,443	5,422,159	2,627,604
Enosburg	2,272,947	1,924,638	121,373	227,315	1,097	0	54,024	0	0	2,328,447	(55,500)	234,985	0	109,847	69,638
Hardwick	3,600,221	2,608,980	224,267	239,709	13,679	0	236,644	0	0	3,323,279	276,942	12,700	0	165,987	123,655
Hyde Park	1,102,638	893,202	51,335	71,387	0	0	41,427	0	0	1,057,351	45,287	9,472	0	4,990	49,769
Jacksonville	595,014	355,993	156,695	20,496	0	0	32,321	0	0	565,505	29,509	4,792	0	0	34,301
Johnson	1,194,793	1,457,546	53,697	55,733	0	0	45,743	0	0	1,612,719	(417,926)	48,511	0	725	(370,140)
Ludlow	4,219,882	3,955,257	143,039	259,187	0	0	128,332	0	0	4,485,815	(265,933)	82,825	0	13,758	(196,866)
Lyndonville	6,629,149	6,221,365	145,803	331,958	114,168	0	332,954	0	0	7,146,248	(517,099)	280,437	0	28,184	(264,846)
Morrisville	4,603,784	4,060,092	204,553	438,670	0	0	165,014	0	0	4,868,329	(264,545)	460,414	0	162,605	33,264
Northfield	3,050,187	2,514,785	35,883	108,234	6,250	0	81,383	0	0	2,746,535	303,652	10,524	0	68,716	245,460
Orleans	1,730,296	1,570,369	48,012	23,358	24,749	0	38,316	0	0	1,704,804	25,492	44,586	0	0	70,078
Readsboro	206,065	186,907	17,240	3,175	0	0	4,871	0	0	212,193	(6,128)	1,492	0	0	(4,636)
Stowe	6,534,950	5,906,270	55,769	227,239	2,863	0	134,365	0	0	6,326,506	208,444	137,843	0	43,534	302,753
Swanton	5,946,275	3,110,170	371,678	654,883	39,404	0	317,387	0	0	4,493,522	1,452,753	281,717	0	1,254,368	480,102
Subtotal	83,521,386	62,528,601	3,797,322	5,277,782	368,905	727,145	3,274,965	0	0	75,974,720	7,546,666	3,335,729	204,443	7,506,757	3,171,195
Cooperatives															
VEC	17,841,532	12,333,020	1,805,282	1,420,897	0	0	754,423	0	0	16,313,622	1,527,910	655,116	448,163	1,696,880	37,983
WEC	9,740,966	6,705,047	843,505	1,006,885	0	0	122,992	0	0	8,678,429	1,062,537	280,320	76,152	887,685	379,020
Subtotal	27,582,498	19,038,067	2,648,787	2,427,782	0	0	877,415	0	0	24,992,051	2,590,447	935,436	524,315	2,584,565	417,003
Total	735,214,148	559,891,766	34,606,475	37,096,376	5,826,186	1,010,861	27,387,652	8,859,502	4,079,685	678,758,503	56,455,645	3,372,005	17,407,867	29,454,125	12,965,658
Vt. Yankee	178,840,019	97,225,413	32,179,469	24,903,052	20,406	1,591,959	8,709,315	7,357,964	(5,130,794)	166,856,784	11,983,235	8,150,612	3,223,092	10,792,084	6,118,671
VELCO	30,148,281	16,354,949	3,422,341	3,506,974	982,960	0	2,921,089	717,597	(971,680)	26,934,230	3,214,051	674,010	(192,669)	2,962,651	1,118,079

Source: Annual Reports

Table 2.14 Vermont Electric Utilities: Condensed Operating Statements

2000

	Total Revenue	Operation Expenses	Maintenance Expenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Net Other Income & Deductions	Net Interest Charges	Net Income
							(DOLLARS)								
Private															
CVPS	322,331,161	251,610,297	14,125,267	15,452,131	956,399	283,716	10,908,717	4,672,194	2,833,459	300,842,180	21,488,981	16,172,106	6,107,571	13,510,901	18,042,615
Citizens	29,013,016	23,011,022	1,479,464	2,767,190	0	0	1,645,664	(1,209,296)	(552,069)	27,141,975	1,871,041	23,937	5,531,768	564,156	(4,200,946)
GMP	277,326,095	239,389,497	7,432,628	9,610,733	5,692,828	0	7,401,507	73,098	(763,838)	268,836,453	8,489,642	(3,147,657)	3,924,582	7,257,388	(5,839,985)
Rochester	786,457	733,700	17,591	30,745	3,218	0	22,764	250	0	808,268	(21,811)	38,575	(982)	1,116	16,630
VMCO	17,477,288	11,346,241	784,796	1,139,050	0	0	649,552	752,097	0	14,671,736	2,805,552	0	0	0	2,805,552
Subtotal	646,934,017	526,090,757	23,839,746	28,999,849	6,652,445	283,716	20,628,204	4,288,343	1,517,552	612,300,612	34,633,405	13,086,961	15,562,939	21,333,561	10,823,866
Municipal															
Barton	1,912,198	1,422,261	61,823	181,095	1,284	0	89,124	0	0	1,755,587	156,611	53,720	0	168,881	41,450
BED	43,324,626	29,856,869	1,720,796	2,511,184	159,724	962,389	1,585,065	0	0	36,796,027	6,528,599	2,298,665	13,055	5,649,735	3,164,474
Enosburg	2,145,797	1,844,233	120,593	178,099	1,097	0	54,302	0	0	2,198,324	(52,527)	65,723	0	128,440	(115,244)
Hardwick	3,587,042	2,480,893	219,296	229,959	44,461	0	209,817	0	0	3,184,426	402,616	33,730	0	167,869	268,477
Hyde Park	990,511	852,954	48,236	85,065	0	0	36,723	0	0	1,022,978	(32,467)	9,229	0	5,630	(28,868)
Jacksonville	599,037	294,812	156,540	20,496	0	0	30,146	0	0	501,994	97,043	4,032	0	1,832	99,243
Johnson	1,261,934	1,157,843	34,978	54,754	625	0	63,909	0	0	1,312,109	(50,175)	66,049	0	1,143	14,731
Ludlow	4,067,207	3,856,402	109,229	271,930	0	0	116,871	0	0	4,354,432	(287,225)	111,008	0	11,383	(187,600)
Lyndonville	6,615,696	5,817,461	269,823	322,986	96,362	0	317,228	0	0	6,823,860	(208,164)	225,966	0	17,030	772
Morrisville	4,737,073	3,953,811	333,824	434,501	0	0	124,119	0	0	4,846,255	(109,182)	273,591	0	177,931	(13,522)
Northfield	3,073,508	2,265,195	32,645	107,433	13,046	0	74,986	0	0	2,493,305	580,203	7,220	0	81,984	505,439
Orleans	1,636,622	1,611,560	34,680	15,595	59,397	0	34,202	0	0	1,755,434	(118,812)	19,175	0	15,622	(115,259)
Readsboro	203,529	176,092	16,507	3,175	0	0	3,402	0	0	199,176	4,353	20,633	0	170	24,816
Stowe	6,023,103	5,574,849	145,831	222,343	2,863	0	110,695	0	0	6,056,581	(33,478)	54,254	(77)	53,700	(32,847)
Swanton	5,949,977	2,673,763	409,408	654,892	39,404	0	290,599	0	0	4,068,066	1,881,911	309,618	0	1,300,259	891,270
Subtotal	86,127,860	63,838,998	3,714,209	5,293,507	418,263	962,389	3,141,188	0	0	77,368,554	8,759,306	3,552,613	12,978	7,781,609	4,517,332
Cooperatives															
VEC	17,807,427	11,968,064	1,629,971	1,363,724	0	0	671,714	0	0	15,633,473	2,173,954	148,226	212,638	1,658,318	451,224
WEC	9,801,652	6,702,256	691,300	990,856	0	0	128,753	0	0	8,513,165	1,288,487	121,292	42,792	889,250	477,737
Subtotal	27,609,079	18,670,320	2,321,271	2,354,580	0	0	800,467	0	0	24,146,638	3,462,441	269,518	255,430	2,547,568	928,961
Total	760,670,956	608,600,075	29,875,226	36,647,936	7,070,708	1,246,105	24,569,859	4,288,343	1,517,552	713,815,804	46,855,152	16,909,092	15,831,347	31,662,738	16,270,159
Vt. Yankee	178,293,622	100,472,339	19,724,219	29,119,458	20,406	1,453,459	9,328,896	8,740,250	(6,709,336)	162,149,691	16,143,931	6,260,693	2,432,084	13,389,900	6,582,640
VELCO	28,759,319	16,573,589	2,388,085	5,036,906	(509,774)	0	2,595,296	1,186,424	(1,195,534)	26,074,992	2,684,327	674,121	(192,669)	2,293,977	1,257,140

Source: Annual Reports

Table 2.15 Vermont Electric Utilities: Condensed Balance Sheets
2003

	Total Utility Plant	Less; Depreciation &Amortization	Net Utility Plant	Other Property & Investments	Current & Accrued Assets	Deferred Debits	Total Assets & Other Debits	Proprietary Capital	Long-Term Debt	Noncurrent & Cur.Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
						DOLLARS							
Private													
CVPS	505,150,838	(211,684,343)	293,466,495	65,563,750	97,473,753	72,667,111	529,171,109	229,304,423	126,750,000	75,922,164	44,954,268	52,240,254	529,171,109
Citizens	47,199,224	(24,079,467)	23,119,757	212,031	4,730,033	9,743,091	37,804,912	33,009,731	0	3,012,702	1,696,925	85,554	37,804,912
GMP	338,973,325	(131,349,896)	207,623,429	13,297,121	44,028,325	96,181,417	361,130,292	99,916,220	93,000,000	68,592,399	49,349,404	50,272,268	361,130,292
Rochester	1,007,102	(779,643)	227,459	147,922	612,299	7,281	994,961	918,348	0	76,613	0	0	994,961
VMCO	28,967,108	(17,426,304)	11,540,804	0	1,194,493	321,978	13,057,275	2,760,116	8,000,000	2,297,159	0	0	13,057,275
Subtotal	921,297,597	(385,319,653)	535,977,944	79,220,824	148,038,903	178,920,878	942,158,549	365,908,838	227,750,000	149,901,037	96,000,597	102,598,076	942,158,549
Municipal													
Barton	6,421,107	(2,643,077)	3,778,030	238,868	769,846	294,294	5,081,038	945,615	3,765,490	336,674	0	33,259	5,081,038
BED	95,681,768	(50,627,353)	45,054,415	15,781,934	12,580,828	46,107,778	119,524,955	43,411,234	70,134,359	5,659,510	0	319,853	119,524,955
Enosburg	6,585,217	(3,054,942)	3,530,275	0	1,040,454	274,919	4,845,648	1,105,432	1,850,000	1,886,558	0	3,658	4,845,648
Hardwick	7,979,930	(4,971,711)	3,008,219	391,316	720,203	44,182	4,163,920	1,166,970	2,604,979	391,971	0	0	4,163,920
Hyde Park	2,112,659	(1,395,669)	716,990	23,800	392,138	0	1,132,928	776,143	100,000	213,513	0	43,271	1,132,928
Jacksonville	1,187,588	(557,058)	630,530	0	163,586	0	794,116	786,912	0	7,204	0	0	794,116
Johnson	1,366,773	(751,177)	615,596	38,100	968,817	0	1,622,513	1,384,150	0	155,867	0	82,496	1,622,513
Ludlow	6,516,861	(4,485,441)	2,031,420	133,950	2,545,289	2,311	4,712,970	3,195,818	20,254	1,242,539	0	254,359	4,712,970
Lyndonville	10,167,490	(5,938,739)	4,228,751	134,116	1,947,377	464,619	6,774,863	6,055,642	79,505	590,927	0	48,789	6,774,863
Morrisville	14,278,129	(8,744,491)	5,533,638	3,363,333	1,052,799	583,110	10,532,880	6,468,131	2,159,775	1,776,350	0	128,624	10,532,880
Northfield	3,909,278	(1,466,286)	2,442,992	48,858	1,874,432	15,567	4,381,849	2,683,157	995,000	700,371	0	3,321	4,381,849
Orleans	1,176,970	(860,790)	316,180	40,230	822,230	0	1,178,640	880,851	0	297,789	0	0	1,178,640
Readsboro	0	0	0	10,964	28,872	0	39,837	35,816	0	3,662	0	359	39,837
Stowe	7,392,963	(4,138,273)	3,254,690	461,942	2,091,865	2,274	5,810,771	4,753,162	305,000	752,608	0	0	5,810,771
Swanton	29,365,771	(10,092,567)	19,273,204	6,536,101	2,558,130	0	28,367,435	10,888,502	17,276,238	202,695	0	0	28,367,435
Subtotal	194,142,504	(99,727,574)	94,414,930	27,203,512	29,556,866	47,789,054	198,964,363	84,537,535	99,290,600	14,218,238	0	917,989	198,964,363
Coops													
VEC	55,596,130	(17,989,946)	37,606,184	273,326	3,846,101	2,568,311	44,293,922	18,552,376	21,760,166	3,948,048	0	33,332	44,293,922
WEC	39,457,516	(11,837,956)	27,619,560	1,179,822	3,056,076	1,304,190	33,159,648	13,365,409	18,465,090	1,172,185	0	156,964	33,159,648
Subtotal	95,053,646	(29,827,902)	65,225,744	1,453,148	6,902,177	3,872,501	77,453,570	31,917,785	40,225,256	5,120,233	0	190,296	77,453,570
Total	**1,210,493,747**	**(514,875,129)**	**695,618,618**	**107,877,484**	**184,497,946**	**230,582,433**	**1,218,576,482**	**482,364,158**	**367,265,856**	**169,239,508**	**96,000,597**	**103,706,361**	**1,218,576,482**
Vt. Yankee	0 [1]	(39,284,624) [2]	(39,284,624)	122,433,281	20,297,168	7,932,239	111,378,064	4,774,322	0	22,132,999	268,646	84,202,097	111,378,064
VELCO	161,308,046	(64,420,790)	96,887,256	1,258,322	24,409,731	4,111,513	126,666,822	9,398,614	53,823,861	60,862,006	2,228,399	353,942	126,666,822

Source: Annual Reports

1 - Vt. Yankee's utility plant was sold to Entergy Nuclear Vermont Yankee on July 31, 2002

2 - Represents the original liability of Vermont Yankee to pay DOE for disposal of spent fuel. This interest payable on this liability is currently

Table 2.16 Vermont Electric Utilities: Condensed Balance Sheets

2002 (DOLLARS)

	Total Utility Plant	Less; Depreciation & Amortization	Net Utility Plant	Other Property & Investments	Current & Accrued Assets	Deferred Debits	Total Assets & Other Debits	Proprietary Capital	Long-Term Debt	Noncurrent & Cur.Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
Private													
CVPS	$496,233,601	($200,778,289)	$295,455,312	$73,754,495	$73,648,155	$68,081,590	$510,939,552	$215,662,276	$137,250,000	$68,779,885	$38,957,543	$50,289,848	$510,939,552
Citizens	$58,530,177	($27,480,322)	$31,049,855	$212,031	$5,572,857	$12,383,174	$49,217,917	$43,418,979	$0	$3,275,209	$2,404,127	$119,602	$49,217,917
GMP	$325,726,203	($122,196,893)	$203,529,310	$21,053,440	$37,341,212	$91,055,548	$352,979,510	$91,806,350	$101,000,000	$74,050,876	$42,060,392	$44,061,893	$352,979,510
Rochester	$977,881	($747,721)	$230,160	$141,542	$445,350	$20,021	$837,073	$760,641	$0	$76,432	$0	$0	$837,073
VMCO	$28,762,524	($16,338,617)	$12,423,907	$302,841	$719,653	$449,786	$13,896,187	$2,329,715	$8,625,000	$2,941,472	$0	$0	$13,896,187
Subtotal	$910,230,386	($367,541,842)	$542,688,544	$95,464,349	$117,727,227	$171,990,119	$927,870,239	$353,977,961	$246,875,000	$149,123,874	$83,422,062	$94,471,343	$927,870,239
Municipal													
Barton	$6,316,621	($2,439,459)	$3,877,162	$232,518	$708,871	$293,511	$5,112,062	$890,638	$3,889,823	$299,502	$0	$32,099	$5,112,062
BED	$92,791,215	($47,815,921)	$44,975,294	$16,609,569	$15,827,884	$49,132,186	$126,544,933	$45,215,608	$74,686,016	$5,621,663	$0	$1,021,646	$126,544,933
Enosburg	$5,782,914	($2,815,126)	$2,967,788	$0	$1,300,656	$361,493	$4,629,937	$623,330	$1,955,000	$2,047,949	$0	$3,658	$4,629,937
Hardwick	$8,253,667	($5,157,622)	$3,096,045	$395,302	$822,623	$32,665	$4,346,635	$1,072,364	$2,533,277	$740,994	$0	$0	$4,346,635
Hyde Park	$2,035,749	($1,321,389)	$714,360	$22,700	$428,349	$0	$1,165,409	$791,555	$125,000	$196,567	$0	$52,287	$1,165,409
Jacksonville	$818,599	($244,341)	$574,258	$10,700	$233,011	$0	$817,969	$739,883	$0	$78,086	$0	$0	$817,969
Johnson	$1,359,565	($699,297)	$660,268	$36,600	$1,106,687	$0	$1,803,555	$1,602,230	$0	$124,021	$0	$77,303	$1,803,555
Ludlow	$6,292,689	($4,200,666)	$2,092,023	$114,189	$2,200,432	$3,235	$4,409,879	$3,392,114	$35,868	$981,897	$0	$0	$4,409,879
Lyndonville	$9,848,260	($5,644,396)	$4,203,864	$156,123	$2,076,312	$366,580	$6,802,879	$6,186,865	$105,358	$442,352	$0	$68,304	$6,802,879
Morrisville	$14,009,863	($8,259,537)	$5,750,326	$2,598,157	$1,479,017	$551,514	$10,379,014	$7,247,652	$2,304,372	$726,558	$0	$100,432	$10,379,014
Northfield	$3,860,003	($1,351,885)	$2,508,118	$50,511	$1,415,997	$19,074	$3,993,700	$2,564,650	$1,040,000	$389,050	$0	$0	$3,993,700
Orleans	$1,114,962	($796,834)	$318,128	$38,330	$871,020	$0	$1,227,478	$939,218	$0	$288,259	$0	$0	$1,227,478
Readsboro	$0	$0	$0	$10,142	$29,528	$0	$39,671	$36,593	$0	$3,078	$0	$0	$39,671
Stowe	$7,279,094	($3,886,590)	$3,392,504	$459,905	$2,139,886	$5,138	$5,997,433	$4,891,807	$370,000	$735,624	$0	$0	$5,997,433
Swanton	$28,853,760	($9,403,151)	$19,450,609	$6,095,394	$2,491,729	$0	$28,037,732	$10,223,965	$17,682,193	$131,574	$0	$0	$28,037,732
Subtotal	$188,616,961	($94,036,214)	$94,580,747	$26,830,140	$33,132,002	$50,765,396	$205,308,286	$86,418,472	$104,726,907	$12,807,174	$0	$1,355,729	$205,308,286
VEC	$52,268,762	($16,869,690)	$35,399,072	$229,102	$4,726,083	$1,356,518	$41,710,775	$17,043,432	$21,101,498	$3,529,639	$0	$36,206	$41,710,775
WEC	$37,878,470	($11,116,199)	$26,762,271	$1,218,828	$3,015,101	$1,190,503	$32,186,703	$12,877,021	$18,002,636	$1,070,057	$0	$236,989	$32,186,703
Subtotal	$90,147,232	($27,985,889)	$62,161,343	$1,447,930	$7,741,184	$2,547,021	$73,897,478	$29,920,453	$39,104,134	$4,599,696	$0	$273,195	$73,897,478
Total	$1,188,994,579	($489,563,945)	$699,430,634	$123,742,419	$158,600,413	$225,302,536	$1,207,076,003	$470,316,886	$390,706,041	$166,530,744	$83,422,062	$96,100,267	$1,207,076,003
Vt. Yankee	$0 [1]	($39,284,624) [2]	($39,284,624)	$118,433,507	$73,794,052	$9,198,273	$162,141,208	$51,202,220	$0	$27,619,136	$376,984	$82,942,868	$162,141,208
VELCO	$144,363,582	($64,300,976)	$80,062,606	$1,410,354	$22,908,411	$3,421,827	$107,803,198	$9,196,427	$55,154,244	$42,073,396	$602,358	$776,773	$107,803,198

Source: Annual Reports

1 - Vt. Yankee's utility plant was sold to Entergy Nuclear Vermont Yankee on July 31, 2002

2 - Represents the original liability of Vermont Yankee to pay DOE for disposal of spent fuel. This interest payable on this liability is currently $82.851,509 (see FERC Form 1-Deferred Credits acct 253.

Table 2.17 Vermont Electric Utilities: Condensed Balance Sheets 2001

	Total Utility Plant	Less; Depreciation &Amortization	Net Utility Plant	Other Property & Investments	Current & Accrued Assets	Deferred Debits	Total Assets & Other Debits	Proprietary Capital	Long-Term Debt	Noncurrent & Cur.Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
						(DOLLARS)							
Private													
CVPS	491,116,787	(191,538,147)	299,578,640	61,358,952	87,214,640	54,039,656	502,191,888	209,224,897	144,300,000	68,042,790	33,424,223	47,199,978	502,191,888
Citizens	59,968,524	(27,392,315)	32,576,209	212,031	4,280,220	14,028,342	51,096,802	43,516,318	0	2,781,765	4,629,578	169,141	51,096,802
GMP	315,911,918	(119,053,502)	196,858,416	20,433,426	39,915,866	109,502,192	366,709,900	113,836,960	84,100,000	44,926,437	40,697,418	83,149,085	366,709,900
Rochester	953,428	(723,308)	230,120	207,256	424,664	47,741	909,781	792,947	0	116,834	0	0	909,781
VMCO	28,287,918	(15,243,795)	13,044,123	406,300	423,474	547,802	14,421,699	2,779,086	9,210,000	2,432,613	0	0	14,421,699
Subtotal	896,238,575	(353,951,067)	542,287,508	82,617,965	132,258,864	178,165,733	935,330,070	370,150,208	237,610,000	118,300,439	78,751,219	130,518,204	935,330,070
Municipal													
Barton	6,165,953	(2,266,595)	3,899,358	171,029	929,178	271,384	5,270,949	887,202	3,988,234	359,826	0	35,687	5,270,949
BED	90,558,425	(45,298,778)	45,259,647	17,258,568	13,020,794	48,255,032	123,794,041	41,021,685	76,537,644	6,084,196	0	150,518	123,794,041
Enosburg	5,483,271	(2,575,504)	2,907,767	0	524,607	8,486	3,440,860	1,094,860	1,080,816	1,261,526	0	3,658	3,440,860
Hardwick	7,479,222	(4,764,652)	2,714,570	319,562	885,129	81,711	4,000,972	858,526	2,693,366	449,080	0	0	4,000,972
Hyde Park	1,877,462	(1,249,822)	627,640	300	408,652	0	1,036,592	818,526	47,835	124,857	0	45,375	1,036,592
Jacksonville	1,187,588	(557,058)	630,530	0	163,586	0	794,116	786,912	0	7,204	0	0	794,116
Johnson	1,307,925	(647,407)	660,518	2,000	1,292,923	0	1,955,440	1,735,965	0	142,172	0	77,303	1,955,440
Ludlow	5,978,682	(3,928,059)	2,050,623	19,915	2,292,472	4,160	4,367,170	3,419,079	51,592	896,499	0	0	4,367,170
Lyndonville	9,428,953	(5,351,309)	4,077,644	345,659	1,594,057	647,423	6,664,783	5,944,103	80,000	552,861	0	87,819	6,664,783
Morrisville	13,807,442	(7,798,438)	6,009,004	3,140,913	973,611	521,791	10,645,319	7,522,364	2,288,723	768,480	0	65,752	10,645,319
Northfield	3,817,739	(1,242,139)	2,575,600	47,364	1,063,929	57,294	3,744,187	2,075,571	1,235,000	433,616	0	0	3,744,187
Orleans	1,052,152	(727,699)	324,453	1,630	943,539	0	1,269,622	952,781	0	316,841	0	0	1,269,622
Readsboro	31,750	(19,648)	12,102	6,116	53,632	0	71,850	40,421	0	31,427	0	0	71,850
Stowe	7,141,938	(3,687,441)	3,454,497	336,142	2,010,072	8,000	5,808,711	4,685,281	466,098	657,332	0	0	5,808,711
Swanton	28,323,587	(8,073,106)	20,250,481	4,972,582	2,591,202	0	27,814,265	8,853,953	18,867,083	93,229	0	0	27,814,265
Subtotal	183,642,089	(88,187,655)	95,454,434	26,621,780	28,747,383	49,855,281	200,678,877	80,697,229	107,336,391	12,179,146	0	466,112	200,678,877
Coops													
VEC	49,541,153	(15,729,662)	33,811,491	628,749	4,521,933	1,554,865	40,517,038	15,783,021	20,568,470	4,142,014	0	23,533	40,517,038
WEC	35,950,504	(10,445,111)	25,505,393	1,458,660	2,363,479	1,603,065	30,930,597	12,459,009	17,524,540	924,219	0	22,829	30,930,597
Subtotal	85,491,657	(26,174,773)	59,316,884	2,087,409	6,885,412	3,157,930	71,447,635	28,242,030	38,093,010	5,066,233	0	46,362	71,447,635
Total	1,165,372,321	(468,313,495)	697,058,826	111,327,154	167,891,659	231,178,944	1,207,456,582	479,089,467	383,039,401	135,545,818	78,751,219	131,030,678	1,207,456,582
Yankee	435,053,815	(330,434,508)	104,619,307	118,232,008	35,344,057	428,898,566	687,093,938	54,175,616	82,660,460	73,073,371	34,022,554	443,161,937	687,093,938
VELCO	128,257,511	(65,386,522)	62,870,989	1,657,493	23,882,580	1,834,780	90,245,842	7,987,339	55,764,526	25,363,260	0	1,130,717	90,245,842

Source: Annual Reports

Table 2.18 Vermont Electric Utilities: Condensed Balance Sheets 2000

	Total Utility Plant	Less; Depreciation & Amortization	Net Utility Plant	Other Property & Investments	Current & Accrued Assets	Deferred Debits	Total Assets & Other Debits	Proprietary Capital	Long-Term Debt	Noncurrent & Cur.Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
						(DOLLARS)							
Private													
CVPS	479,070,024	(177,218,363)	301,851,661	67,645,723	98,730,802	70,732,086	538,960,272	215,265,969	148,300,000	86,323,783	54,950,545	34,119,975	538,960,272
Citizens	64,246,734	(26,018,016)	38,228,718	212,031	5,433,790	16,501,974	60,376,513	51,989,401	1,071	2,563,791	5,619,683	202,567	60,376,513
GMP	304,946,052	(110,272,783)	194,673,269	20,846,259	56,512,730	80,341,856	352,374,114	104,838,969	81,800,000	85,600,449	42,670,754	37,463,941	352,374,114
Rochester	881,634	(691,380)	190,254	194,504	252,397	76,861	714,016	568,780	0	143,542	1,694	0	714,016
VMCO	28,235,211	(14,133,000)	14,102,211	505,103	661,696	355,201	15,624,211	2,437,065	9,755,000	3,432,146	0	0	15,624,211
Subtotal	877,379,655	(328,333,542)	549,046,113	89,403,620	161,591,415	168,007,978	968,049,126	375,100,184	239,856,071	178,063,711	103,242,676	71,786,483	968,049,126
Municipal													
Barton	6,637,241	(2,609,500)	4,027,741	0	1,076,217	227,423	5,331,381	916,146	3,935,479	441,294	0	38,462	5,331,381
BED	88,192,982	(43,504,898)	44,688,084	15,881,060	17,018,393	47,400,518	124,988,054	38,394,080	79,992,226	6,505,763	0	95,984	124,988,054
Enosburg	5,247,551	(2,358,949)	2,888,602	0	514,037	11,112	3,413,751	1,025,222	1,166,543	1,214,669	0	7,317	3,413,751
Hardwick	7,399,393	(4,567,780)	2,831,613	318,883	865,746	121,658	4,137,900	590,026	2,445,459	1,102,415	0	0	4,137,900
Hyde Park	1,832,743	(1,178,435)	654,308	300	421,214	0	1,075,822	768,757	79,686	180,629	0	46,750	1,075,822
Jacksonville	1,114,495	(536,562)	577,933	0	181,432	0	759,365	752,862	0	6,503	0	0	759,365
Johnson	1,251,745	(596,743)	655,002	2,000	1,575,641	23,003	2,255,646	2,074,177	0	108,225	0	73,243	2,255,646
Ludlow	6,593,987	(3,625,622)	2,968,365	23,450	2,436,773	5,084	5,433,672	3,570,153	67,771	865,748	0	930,000	5,433,672
Lyndonville	9,143,206	(5,085,518)	4,057,688	575,494	1,218,910	697,295	6,549,387	5,852,247	131,223	565,917	0	0	6,549,387
Morrisville	13,156,121	(7,365,768)	5,790,353	3,137,635	1,339,325	521,859	10,789,172	7,489,100	2,451,136	774,552	0	74,384	10,789,172
Northfield	3,738,221	(1,098,029)	2,640,192	17,968	851,770	155,487	3,665,417	1,830,111	1,305,000	530,306	0	0	3,665,417
Orleans	828,378	(695,989)	132,389	1,630	860,537	11,018	1,005,574	837,054	0	168,520	0	0	1,005,574
Readsboro	31,750	(16,473)	15,277	2,600	54,164	0	72,041	45,057	0	24,947	0	2,037	72,041
Stowe	7,010,809	(3,479,821)	3,530,988	157,994	1,872,463	10,863	5,572,308	4,382,527	562,403	627,378	0	0	5,572,308
Swanton	28,323,587	(8,073,106)	20,250,481	4,972,582	2,591,202	0	27,814,265	8,853,953	18,867,083	93,229	0	0	27,814,265
Subtotal	180,502,209	(84,793,193)	95,709,016	25,091,596	32,877,824	49,185,320	202,863,755	77,381,472	111,004,009	13,210,095	0	1,268,177	202,863,755
VEC	49,691,248	(17,528,238)	32,163,010	623,649	4,775,575	1,660,236	39,222,470	15,091,468	18,755,179	5,348,653	0	27,170	39,222,470
WEC	34,426,200	(9,929,409)	24,496,791	1,542,370	2,619,791	1,448,671	30,107,623	11,954,269	16,945,551	1,175,318	0	32,485	30,107,623
Subtotal	84,117,448	(27,457,647)	56,659,801	2,166,019	7,395,366	3,108,907	69,330,093	27,045,737	35,700,730	6,523,971	0	59,655	69,330,093
Total	1,141,999,312	(440,584,382)	701,414,930	116,661,235	201,864,605	220,302,205	1,240,242,974	479,527,393	386,560,810	197,797,777	103,242,676	73,114,315	1,240,242,974
Yankee	428,761,630	(307,446,724)	121,314,906	110,736,342	37,186,415	401,324,122	670,561,785	54,320,942	119,210,256	51,217,416	36,561,011	409,252,160	670,561,785
VELCO	117,985,072	(61,911,231)	56,073,841	2,824,416	23,531,671	1,381,253	83,811,181	8,249,260	41,717,864	32,235,616	0	1,608,441	83,811,181

Source: Annual Reports

3. TELECOMMUNICATIONS

A. Overview:

Efforts to allow for competition and consumer choice in telecommunications, which began roughly fifteen years ago, continue. The Department has worked with the Board to establish a consumer protection framework that allows consumers to make informed choices of providers and services. Carrier's rights to use and interconnect with one another's networks are dictated in large part by a 1996 federal law, the FCC's interpretation of which is still unsettled some eight years later. In spite of the unsettled law, the Board is often asked to resolve disputes concerning access by one carrier (typically an entrant company) to another carrier's (typically an incumbent company's) network. In such disputes, the Department's typically provides the Board with a third party, carrier-neutral perspective. Where competition is insufficient to preclude carriers from charging unreasonably high prices for service, the Department and Board continue to the prices, terms and conditions upon which such services are offered. Verizon-Vermont's prices are constrained by an "incentive regulation" framework, which mitigated the need for frequent examination of its earnings. However, the Verizon incentive regulation plan expires in 2005, and the other incumbent local phone companies continue to be regulated on a cost-of-service basis. The Department's role has been to assess whether these companies' prices are in line with their overall costs, and to propose or negotiate for price reductions or service enhancements with prices too greatly exceed costs.

Well over a hundred companies have been authorized by the Board to provide local telecommunications service in Vermont, and hundreds more to provide long distance service within the state. Although many offer no service here, Title 30 of Vermont law requires the Department to continue reviewing and making recommendations concerning issuance and revocation of authority to offer service, major financing transactions, and the reasonableness of the terms and conditions upon which the companies offer service (as set forth in tariffs). During 2004, the Board solicited recommendations from the Department and carriers on the structure and content of an administrative rule that would allow the Board to waive, relax, or streamline regulatory requirements applicable to carriers that are to be non-dominant.

B. Major Telecommunications Cases

Brand X v FCC - Appeal of FCC Order on Regulatory Classification of Cable Modem Broadband Service

On March 14, 2002, the FCC adopted a declaratory ruling, in which it determined that cable modem service is an "information service" for regulatory purposes under the Communications Act of 1934, as amended, and that it does not contain a separate "telecommunications service." Several parties appealed the FCC order and the case was assigned to the Ninth Circuit Court of Appeals. DPS, along with the Public Service Board and Attorney General, intervened in the appeal and argued that cable modem service is part telecommunications service and that the FCC had erred in classifying cable modem service solely an information service. The most significant factor in the classification of cable modem service is that providers of information services are not required to provide the consumer protections of common carriers, such as non-discriminatory access, that are required of telecommunications carriers. The Ninth Circuit determined that cable modem service is part information service, but also part telecommunications service, and therefore remanded the case to the FCC. The FCC appealed the decision and it is presently pending before the U.S. Supreme Court. DPS is working in coordination with other aligned parties on the appeal in support of the Ninth Circuit decision.

Dockets 5918 and 6934 - RCC Atlantic

These Dockets investigated whether RCC Atlantic, a cellular service provider in Vermont, qualified for Eligible Telecommunications Carrier designation. In Docket 5918 proceedings conducted in 2002 and 2003, RCC sought ETC designation in the non-rural service areas served by Verizon. In 2004, in Docket 6934, RCC sought ETC designation in the rural service areas served by Vermont's nine Independent Telecommunications Carriers (the "ITCs"). The designation was not opposed by any party in Docket 5918, but was opposed in Docket 6934 by the ITCs. The Department supported RCC's petitions in both Dockets and the Board granted the company the requested designations. Designation for both the non-rural and rural service areas allows the company to access federal high cost support funding in order to expand and improve its coverage and service throughout the entire state. The Board's decisions are significant because it is the first instance of a competitive carrier in Vermont receiving the designation and should result in expanded and improved cellular services throughout the state.

Dockets 6101/6223/6656/6778/6877 - Adelphia Cable CPG Renewal, Sanctions, CPG Modification and Enforcement

Following the Board's Orders in Dockets 6101 and 6223 in 2000 renewing Adelphia's CPGs and also imposing penalties of $567,500, Adelphia appealed to federal court certain of the conditions the Board placed on its CPG renewal. Subsequently, in 2002, the Board opened Docket 6656 to investigate generally Adelphia's compliance with its CPGs. Also in 2002, in Docket 6778, Adelphia sought Board approval to have its CPGs amended to excuse it from completing the construction of 1,200+ remaining miles of line extensions that it had previously agreed to build in settlement of a prior enforcement action against the company. In April of 2003, the Board rejected Adelphia's request and ordered the company to comply with its previous line extension commitments within a period of three months. Adelphia appealed the Board's Order into federal district court. When Adelphia failed to achieve the directed compliance, the Board opened Docket 6877 to consider sanctions, up to and including potential revocation of the company's CPGs for its failure to build the outstanding line extensions. The new Docket (6877) was running concurrently with the federal court appeal initiated by Adelphia. Adelphia unsuccessfully attempted to use the federal court appeal to stay the Board's enforcement action in Docket 6877, claiming that the Board could not act until the federal court appeal was final. Following Adelphia's loss on the stay request in federal court, DPS negotiated a settlement with Adelphia to resolve all the outstanding issues in the two pending federal court cases, as well as the two pending enforcement proceedings before the Board. The settlement provides an opportunity for Adelphia to bring its operations in Vermont into compliance with its CPGs and Vermont law. The Board approved the settlement on March 5, 2004. The settlement requires the company to meet all of its outstanding line extension obligations, and requires further expansion of its plant into more rural areas of the state in lieu of payment of additional penalties. The company's obligations are secured through a bond and through claims against the company in its bankruptcy proceeding, including a priority administrative expense claim of up to $5.8 million. To date, the company appears to be on its way to compliance which, if achieved, will result in a minimum of 1,400+ miles of new cable plant reaching into Vermont's less densely populated areas, making broadband and cable services available to thousands more Vermonters.

Docket 6533 - Authority Granted for Verizon-Vermont to Offer Long-Distance Service

By the terms of the 1984 anti-trust consent decree that resulted in the break-up of AT&T, Verizon and the other divested Regional Bell Operating Companies were precluded from offering long-distance service. A 1996 federal law granted the FCC discretion to allow the Bell Companies back into the retail long-distance business, state-by-state, if the companies could demonstrate that their local service territories were irrevocably

open to local telephone service competition. The federal law required the F.C.C., in considering such requests, to give consideration to the recommendation of state commissions such as the Board.
In August 2001, Verizon-Vermont petitioned the Board for a favorable recommendation. The Department participated in the Board's investigation, with the much of the discussion and negotiation centering on whether Verizon's proposed wholesale "performance assurance plan" would provide adequate assurance that Verizon would not discriminate against other local exchange companies that sought to use Verizon's network. Verizon agreed to modify and adopt a performance assurance plan that adequately addressed the Department's and Board's concerns, and in January 2002, the Board offered its conditional support for a Verizon-Vermont petition to the FCC. The FCC approved Verizon-Vermont's request and in April 2002, Verizon began offering long distance service in Vermont. On two occasions subsequent to this investigation, Verizon proposed and obtained the Department's support and the Board's consent for revisions to the performance assurance plan. With adoption of the performance assurance plan, the Board subsequently closed a prior investigation into the need for telephone wholesale service quality standards.

Verizon Pole AttachmentTariff - Docket 6553

This Docket was an investigation into Verizon's pole attachment tariff. The tariff governs the rates, terms and conditions under which another utility may affix its facilities to Verizon's poles. The Docket's importance is grounded in the fact that it set precedent for all other pole-owning utilities, and the fact that Adelphia is in the process of a significant plant expansion that will require fair access to utility poles. Extensive hearings were held and briefs filed. Multiple proposed decisions and Board Orders followed culminating with a final Order in June, 2004 and a compliant Verizon tariff filed in July, 2004.

Docket 6729 - Investigation into Marketing Practices of Business Options Inc.

In 2002, the Department's Consumer Affairs Division began receiving numerous consumer complaints about a telecommunications company, Business Options, Inc. ("BOI"). The complaints included billing problems,the unauthorized switching of a consumers interexchange service, misrepresentations in solicitations, and other violations. Investigation by the Department revealed a host of problems with BOI in addition to the consumer complaints including the sale of service that was not tariffed here in Vermont. The Department determined that allowing BOI to continue to do business in the state was not in the public good, and negotiated a settlement with BOI to return money to harmed customers, specify an orderly transition of customers from BOI to other carriers, and revoke BOI's authority to offer telecommunications service in Vermont. The Board accepted the settlement.

Docket 6763- Verizon's Use of Creosote Poles

On July 22, 2003, the Board approved a stipulation among Verizon, the International Brotherhood of Electrical Workers ("IBEW"), DPS, and various electric utilities under which, except in rare circumstances, Verizon would cease the use of creosote-treated poles in Vermont. The case began when seriously dripping or "bleeding"creosote poles caused the IBEW to raise concerns with the Board on behalf of members whose work required contact with the poles. The allegations included personal injury and the risk of bodily harm to workers exposed to leaking creosote. In addition, members of the public had come into contact with "bleeding" creosote poles. Major features of the approved stipulation include but are not necessarily limited to:
Verizon may not place creosote-treated poles in Vermont, except under certain defined (and rare) circumstances. In the event Verizon does use a creosote-treated pole, it will maintain documentation on the reasons for the necessity of using such a pole. When a creosote-treated pole is used, it must not be dripping or bleeding liquid chemical. Verizon will use copper napthenate or pentachlorophenol treated poles in Vermont. Verizon was required to inspect all creosote-treated poles installed since September 2000 that are in sensitive or heavily travelled locations, determine which poles need to be replaced, and submit a plan and schedule for

replacement. A separate process was established for responding to complaints by the Department, the landowner, or another utility about individual poles.

Verizon was required to replace, in the service territories of various electric utilities, all creosote poles to which facilities have not yet been transferred. Verizon, GMP, and CVPS agreed to send written communication to each customer every year with information about chemically-treated poles.

Docket 6957- Verizon Service Quality Compensation

Verizon Vermont operates under a Retail Service Quality Plan. This Service Quality Plan was a result of a settlement reached between Verizon and the Department in the alternative regulation plan that the company is currently operating under. At the time that alternative regulation plan was approved the Board emphasized the importance of a service quality plan being maintained or enhanced under the plan. The Service Quality Plan had standards and a precise way to calculate any compensation owed to consumers if those standards were missed. In 2003, Verizon failed to meet the applicable standards of the Service Quality Plan in five performance areas. The calculated compensation to consumers for such failures amounted to approximately $8 million. Verizon made two attempts to obtain a waiver from the Board to reduce the amount owed by Verizon. The Department opposed those attempts. The Board denied the request for waiver. This docket was opened to determine how the money would be returned to consumers. The returned compensation could be in the form of consumer credits or network improvements or some combination. The outcome of the docket is pending.

Docket 6959 - Verizon Alternative Regulation Plan

The Docket is an investigation into a new alternative regulation plan for Verizon Vermont. The existing plan expires in April of 2005 and it is necessary to determine whether or not a successor plan is appropriate, and if so what its terms should be, or whether Verizon should be returned to traditional rate-of-return regulation. Both Verizon and the Department have filed their direct cases and technical hearings are scheduled for the first week of February 2005. A rebuttal phase will follow. The Department's direct testimony estimates significant over earnings by the company and proposes a mechanism that would allow Verizon to retain some portion of its increased earnings in exchange for an expansion of broadband availability into more rural areas of Vermont. A Board decision is expected in July 2005.

Small Local Phone Company Rate Reviews

Nine local telephone companies (typically referred to as "independent") serve roughly 15% of Vermont phone customers that are not located within Verizon-Vermont's service area. During the biennia, the Board and Department formally or informally reviewed the costs-of-service and rate levels of Vermont's small local telephone companies. In April 2001, Waitsfield-Fayston Telephone Company agreed in a settlement with the Department to reduce rates by approximately $1.7 million per year. In October 2001, the Board approved a settlement between Northland Telephone Company and the Department, under which Northland reduced annual revenues by $594,000, or about 15%. In a settlement reached with the Department during March 2002, three small companies owned by TDS- Ludlow, Northfield and Perkinsville Telephone Companies agreed to reduce rates by an aggregate of $300,000 per year, or about 7%. Northfield further reduced its rates by another $124,000 during 2004.

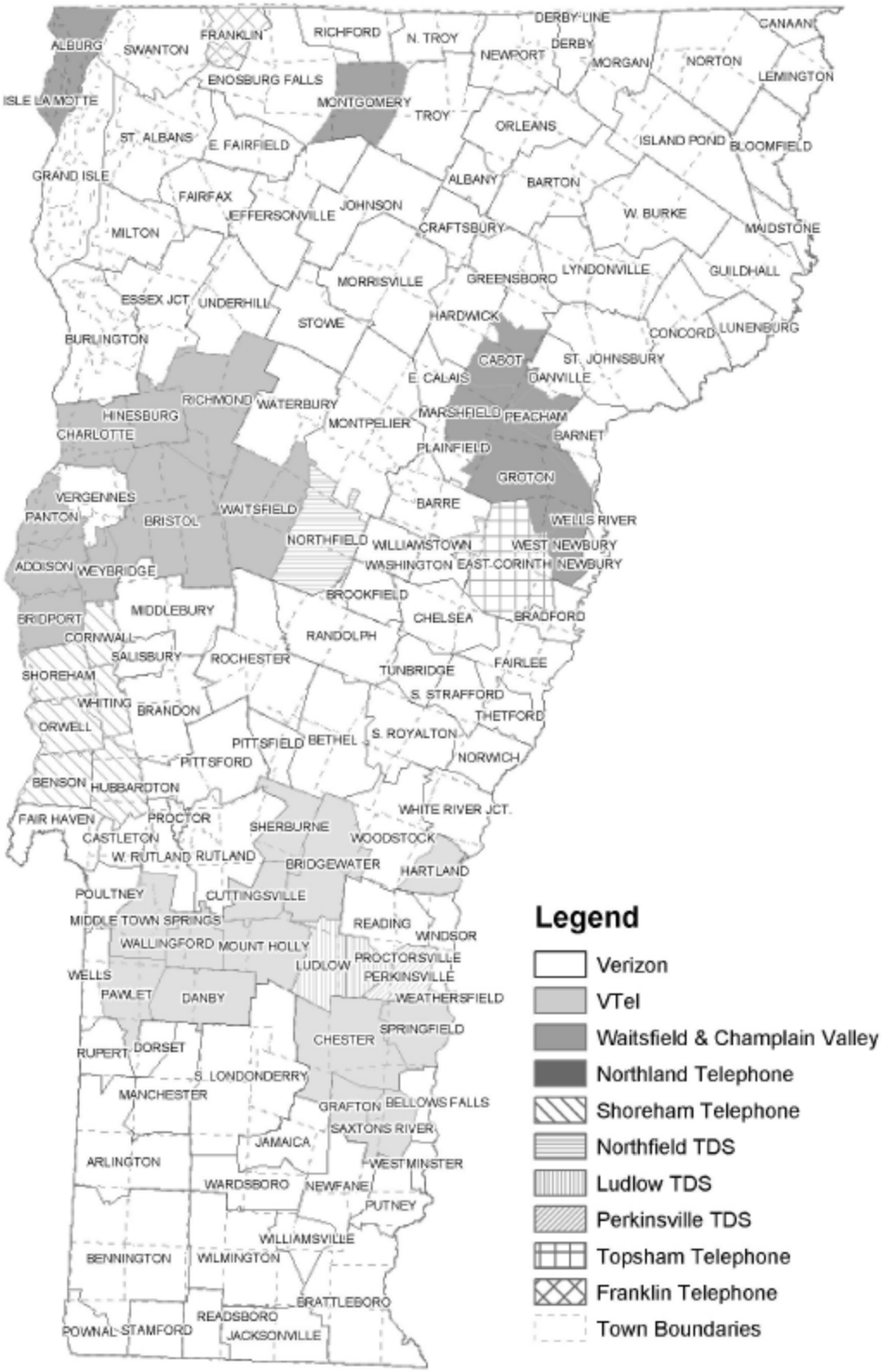
In an investigation during 2004, finding that revenues that Shoreham Telephone receives through an national "average schedule" revenue pool should be taken into account in setting the prices of Shoreham's intrastate services, the Board directed Shoreham to file a proposal to reduce those prices by an average of 75%. The

Department participated in this investigation, filing its analysis of the company's cost of service and of whether the "average schedule" revenues should be taken into account. As of December 2004, the Board is awaiting a rate design proposal from Shoreham.

Carrier Eligibility for Federal Universal Service Support

The F.C.C. administers several funds to which all telecommunications carriers contribute, and from which "eligible telecommunications carriers" ("ETCs") are compensated for providing telephone service in rural or high-cost areas. To be eligible for support, the state commission in respective states, which in Vermont is the Board, must find that carrier will use or has used to support the provision of basic telephone service. The Board must also find that the carrier is now capable of, or has committed, to providing service to all consumers within the service area for which it seeks ETC designation, or that it has committed to expanding its service coverage. The Board revisits the designations each two to three years, and the Department offers the Board its assessment of each carrier's capabilities and accomplishments. Verizon and all nine of the Vermont independent phone companies are presently designated as ETCs, as receive roughly $20 million in federal universal service support as a result. In addition, during 2004, the Board designated RCC Atlantic (which does business as "Unicel") as an ETC statewide, making it eligible for roughly $10 million in annual support.

Figure 3-1 Telephone Exchange by Incumbent Local Telephone Company 2004



C. Other Developments

Continuous Emergency Access:

In March 2002, many years of Department advocacy culminated with the Board's adoption of PSB Rule 7.100 on Continuous Emergency Access. This rule provides an important extension of the Enhanced 911 benefits that Vermonter's enjoy, increasing public safety. The rule mandates that service providers maintain primary residential lines' ability to place 911 calls, even after the line has been disconnected for other purposes, unless certain circumstances set forth in the rule are met. This rule increases Vermonters' access to emergency services.

"N11" Telephone Number Administration:

The F.C.C. has reserved "N11,"i.e. three digit phone numbers that end with 1-1) for certain public-service uses, and allows state utility commissions such as the Board to designate administrators for these numbers for specific regions or statewide. The best known and most frequently used is 911, for which the Vermont Enhanced 9-1-1 Board administers. The customary or FCC-assigned uses for each code (not all of which are in use in Vermont) are as follows:

Table 3-1

N11 CODE	DESCRIPTION
211	Community Information and Referral Services
311	Non-Emergency Police and Other Governmental Services
411	Local Telephone Directory Assistance
511	Traffic and Transportation Information
611	Repair Service
711	Telecommunications Relay Service (TRS)
811	Telephone Company Business Office, possibly moving to "Dig-Safe" hotline service
911	Emergency

Vermont's Telephone Relay Service(TRS), which is overseen by the Department, met an FCC-mandated national deadline to introduce 711 dialing. The Department has sponsored a public information campaign to inform Vermonters of this new option.

In 2000, the FCC assigned 211 and 511 for use, and delegated authority to state commissions, such as the Board, to designate administrators for the numbers and underlying services. During 2002, the Board adopted an administrative rule drafted by the Department that was intended to ensure an orderly and effective process for identification and designation of N11 service administrators, and for ensuring coordinated and uniform implementation of N11 services by telephone companies. In 2003, the Vermont Agency of Transportation ("VTrans") petitioned and obtained the Board's designation as administrator statewide for the use of 511 for distribution of highway and travel information. At the end of the biennium period a petition by designated United Way of Vermont as statewide administrator for 211 calling for social services information referral was

being developed. The Department worked with both entities, in advance of their petitions, to assure their services would meet the Board's standards. No entity has yet petitioned the Board to use 311.

Telephone Numbering

A key public policy objective of the state is to extend for as long as possible the use of a single area code, 802 area in Vermont. In 2002, the Board took an important step to extend the remaining life of the 802 area code when it reduced the size of the blocks of numbers assigned when requested by a carrier to serve a new exchange or accommodate growth. The numbers are now most often assigned in blocks of 1,000 instead of 10,000. Carriers that have implemented the ability to port telephone numbers from one local carrier to a competing local carrier are also required to donate blocks of 1,000 numbers within their existing 10,000s blocks if those thousand number blocks have no or very few numbers already assigned. This thousands-block pooling should become more effective as more carriers, including wireless carriers, add the ability to pool numbers. The Department advised the Board on this issue.

Vermont Telecommunications Plan

The Department adopted the third edition of the *Vermont Telecommunications Plan* in August 2000, and released the Final Draft of the fourth edition in June 2004. The objectives and recommendations of both plans were developed with the benefit of comments and review by the public at-large and stakeholder groups. The findings and recommendations of the plans are too numerous to summarize here. The adopted 2004 Plan, however, is available from the Department of Public Service in hardcopy or from its website.

Wireless

The last four years saw a flurry of activity followed by a more measured pace of development as a number of new service providers and real estate developers made proposals to establish new towers or other types of new antenna sites. The result has been the introduction of services by two new wireless carriers, Sprint PCS and Nextel, in addition to expansions by the existing cellular service providers, Rural Cellular Corporation (d/b/a Cellular One), Verizon Wireless, and U.S. Cellular. New service so far, however, is still limited in its availability in rural regions of the state.

There has been a degree of variability in the potential new entrants into the wireless market in Vermont. Vtel's spectrum licences have been sold to AT&T. Devon Mobile, an Adelphia affiliate, had been actively seeking sites in Vermont, but filed for Chapter 11 bankruptcy protection in 2002. Other national carriers who hold FCC licences for Vermont include T-Mobile and AT&T Wireless.

The Department has provided information on wireless telecommunications technology to various regional planning commissions, provided comments to the Environmental Board on its new Act 250 application form for wireless facility applications, to the Central Vermont Regional Planning Commission and the Vermont League of Cities and Towns on model zoning bylaw for wireless facilities, and to other agencies within the administration, including the Agency of Commerce and Community Development, on policies related to wireless services.

The range of services offered by wireless service providers has expanded, as have the diversity of siting requirements. Digital cellular service is now more commonplace and offers greater clarity, though frequently with a more limited range. PCS (Personal Communications Service), currently offered by Sprint PCS is also a digital service, operating at a higher frequency and requiring more antennas to cover the same area. Text messaging and walkie-talkie-like push-to-talk features are examples of new variations on plain wireless voice service. Wireless phone carriers have introduced mobile Internet-access services. Furthermore, a handful of small Vermont ISPs have begun using license-free wireless spectrum to provide high-speed fixed wireless Internet access.

Broadband Deployment

During these biennia, the deployment of broadband services to the mass market of Vermont consumers has picked up pace. Significant gaps exist but substantial progress has been made, especially in certain areas of the state. Service has come with the maturation of several different technologiesCcable modems, digital subscriber line (DSL), wireless Internet, and satellite Internet. In 2000, the Department, in conjunction with the Tax Department, completed a legislatively mandated study, A Broadband Deployment and Taxation Policy. That report concluded that Vermont was not then behind in the deployment of broadband services relative to other places in the country. However, the deployment of broadband services continues apace, and it is important to make progress. Additional information regarding the status of broadband deployment was included in the Department's drafts of the *Vermont Telecommunications Plan*. (See Figures 3.3 –3.5 for maps of the state of cable modem and DSL, and high-speed wireless Internet deployment in Vermont.) Table 3.2 displays the status of broadband deployment in Vermont.

Table 3-2 Estimated Population with Access to Broadband—May 2004

COUNTY	Broadband	DSL	Cable Modem	WISP
Addison	84%	71%	42%	0%
Bennington	83%	56%	83%	2%
Caledonia	66%	32%	60%	0%
Chittenden	94%	78%	89%	23%
Essex	23%	0%	21%	13%
Franklin	70%	59%	54%	0%
Grand Isle	62%	62%	0%	0%
Lamoille	57%	24%	47%	14%
Orange	44%	9%	32%	4%
Orleans	53%	23%	52%	29%
Rutland	89%	57%	76%	0%
Washington	88%	73%	74%	0%
Windham	71%	52%	62%	3%
Windsor	76%	59%	62%	13%
Total	79%	57%	67%	9%

During the biennia, the Department also provided staff expertise in support of initiatives by partner organizations to advance the deployment of broadband service in Vermont. This includes the Vermont Council on Rural Development's efforts to aggregate potential customers and find service providers in unserved rural areas. It also included staff support loaned to the telecommunications infrastructure advancement initiative at the Agency of Commerce and Community Development.

Table3-3

Access Lines served by Vermont Incumbent Local Exchange Telephone Companies

2003

Legal Name of Company	Doing Business As	Business	Public	Residential	Special Access Lines (non-switched)	Local Private Lines	Total
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	38	1	841	0	0	880
Ludlow Telephone Co.	TDS Telecom	1,198	0	4,231	0	0	5,429
Northfield Telephone Co.	TDS Telecom	629	0	2,494	0	0	3,123
Perkinsville Telephone, Co.	TDS Telecom	108	0	861	0	0	969
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	363	0	3,342	8	0	3,713
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	357	0	5,868	0	0	6,225
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	108	0	1,522	0	0	1,630
Verizon Vermont New England Inc.	Verizon	106,394	2,210	230,238	132,955	26,487	498,284
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	4,502	0	16,717	308	0	21,527
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	3,614	0	17,422	335	0	21,371
	Total	117,311	2,211	283,536	133,606	26,487	563,151

2002

Legal Name of Company	Doing Business As	Business	Public	Residential	Special Access Lines (non-switched)	Local Private Lines	Total
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	39	1	847	4	0	891
Ludlow Telephone Co.	TDS Telecom	1,610	0	4,264	0	0	5,874
Northfield Telephone Co.	TDS Telecom	719	0	2,500	0	0	3,219
Perkinsville Telephone, Co.	TDS Telecom	125	0	878	0	0	1,003
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	353	0	3,366	7	0	3,726
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	767	0	5,591	0	0	6,358
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	108	0	1,506	0	0	1,614
Verizon Vermont New England Inc.	Verizon	114,329	2,601	245,855	80,254	28,813	471,852
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	4,378	109	16,738	492	0	21,717
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	3,597	0	17,585	349	0	21,531
	Total	126,025	2,711	299,130	81,106	28,813	537,785

Note:

"Public" includes Semi-Public Pay telephones. Formerly Public included company stations, extension & PBX stations, which are now tabulated under "Business."

" Special Access Lines" are dedicated lines from a customer to a long distance company provided by a local phone company.

"Local Private Lines" defined in the FCC acount as a special service circuit with either a serial number or telephone number format umber format.

Source: Annual Reports to DPS

Table 3-4

Vermont Incumbent Local Exchange Telephone Companies
Condensed Balance Sheets, 2002 -2003

2003

Legal Name of Company	Doing Business As	Plant in Service & Construction	Less Depreciation Reserve	Net Plant
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	$1,685,986	$1,189,371	$496,615
Ludlow Telephone Co.	TDS Telecom	$11,504,872	$8,153,179	$3,351,693
Northfield Telephone Co.	TDS Telecom	$8,961,548	$6,668,743	$2,292,805
Perkinsville Telephone, Co.	TDS Telecom	$2,489,257	$2,330,903	$158,354
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	$8,874,295	$6,052,944	$2,821,351
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	$22,501,268	$17,226,527	$5,274,741
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	$6,281,341	$2,768,216	$3,513,125
Verizon Vermont New England Inc.	Verizon	$1,072,266,000	$723,427,000	$348,839,000
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	$64,786,835	$41,927,356	$22,859,479
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	$60,233,752	$36,301,952	$23,931,800
	Total	$1,259,585,154	$846,046,191	$413,538,963

2002

Legal Name of Company	Doing Business As	Plant in Service	Less Depreciation Reserve	Net Plant
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	$1,569,302	$1,053,083	$516,219
Ludlow Telephone Co.	TDS Telecom	$13,930,688	$8,253,094	$5,677,594
Northfield Telephone Co.	TDS Telecom	$11,571,858	$7,111,071	$4,460,787
Perkinsville Telephone, Co.	TDS Telecom	$3,239,319	$2,366,012	$873,307
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	$8,762,111	$5,525,358	$3,236,753
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	$21,622,831	$15,691,794	$5,931,037
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	$5,453,600	$2,521,645	$2,931,955
Verizon Vermont New England Inc.	Verizon	$1,052,901,000	$681,693,000	$371,208,000
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	$63,123,847	$39,076,215	$24,047,632
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	$58,994,552	$33,559,755	$25,434,797
	Total	$1,241,169,109	$796,851,026	$444,318,082

Source: Annual Reports

Table 3-5

Vermont Incumbent Local Exchange Telephone Companies : Condensed Operating Statements, 2002-2003

2003

Legal Name of Company	Doing Business As	Gross Operating Revenue	Local Service	Toll & Network Access Service Intrastate	Network Access Services Interstate	Other Misc. Revenue	Depreciation, Maint. & Operating Exp.	Taxes, Including Income	Net Operating Income	Other Income	Other Deductions from Income	Net Income
		(DOLLARS)										
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	633,267	152,519	94,281	353,481	32,986	500,052	65,842	67,373	55,742	1,755	121,360
Ludlow Telephone Co.	TDS Telecom	3,425,058	1,273,550	630,035	1,407,168	114,305	2,755,714	312,415	356,929	53,707	57,777	352,859
Northfield Telephone Co.	TDS Telecom	2,741,475	1,127,544	494,262	1,052,078	67,591	2,024,241	315,340	401,894	134,172	334,266	201,800
Perkinsville Telephone, Co.	TDS Telecom	653,082	292,217	121,639	223,263	15,963	459,431	80,950	112,701	39,330	24,800	127,231
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	3,599,292	1,397,578	448,133	1,683,703	69,878	2,061,470	101,589	1,436,233	33,882	285,637	1,184,478
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	6,150,459	2,696,643	672,789	2,761,041	19,986	4,748,093	691,958	710,408	103,316	0	813,724
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	1,232,298	397,897	232,148	601,179	1,074	1,070,617	104,948	56,733	44,745	70,275	31,203
Verizon Vermont New England Inc.	Verizon	232,240,709	128,941,267	11,253,216	75,736,691	16,309,535	204,972,000	9,225,000	18,043,709	2,672,000	8,724,000	11,991,709
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	23,104,417	5,984,044	3,950,855	12,661,221	508,297	18,586,712	2,171,338	2,346,367	1,086,588	574,464	2,858,491
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	21,732,776	7,703,379	2,045,062	11,228,905	755,430	17,498,798	655,663	3,578,315	59,423	1,175,406	2,462,332
		295,512,833	149,966,638	19,942,420	107,708,730	17,895,045	254,677,128	13,725,043	27,110,662	4,282,905	11,248,380	20,145,187

2002

Table 3-5 (cont.)

Legal Name of Company	Doing Business As	Gross Operating Revenue	Local Service	Toll & Network Access Service Intrastate	Network Access Services Interstate	Other Misc. Revenue	Depreciation, Maint. & Operating Exp.	Taxes, Including Income	Net Operating Income	Other Income	Other Deductions from Income	Net Income
		(DOLLARS)										
Franklin Telephone Co., Inc.	Franklin Telephone Co., Inc.	599,346	169,732	116,043	294,434	19,137	454,559	61,328	83,459	39,395	25,290	97,564
Ludlow Telephone Co.	TDS Telecom	3,391,288	1,292,556	609,393	1,350,755	138,584	2,655,642	355,191	380,455	37,546	55,981	362,021
Northfield Telephone Co.	TDS Telecom	2,600,186	1,129,568	429,213	987,787	53,618	1,944,011	335,464	320,711	-63,471	20,072	237,168
Perkinsville Telephone, Co.	TDS Telecom	616,611	291,087	92,694	209,687	23,144	477,868	64,571	74,172	55,086	32,273	96,985
Shoreham Telephone Co., Inc.	Shoreham Telephone Co., Inc.	3,497,742	1,384,899	475,510	1,630,060	7,273	2,261,392	90,025	1,146,325	20,778	26,961	1,140,142
STE-NE Acquistion Corp.	Fairpont-Northland Telephone	6,659,905	2,988,563	733,634	2,931,815	5,893	4,916,496	846,435	896,974	0	0	896,974
Topsham Telephone Co., Inc.	Topsham Telephone Co., Inc.	1,095,810	433,196	92,719	562,716	7,179	922,127	111,177	62,506	346,982	76,460	333,028
Verizon Vermont New England Inc.	Verizon	239,075,368	136,801,618	12,566,953	73,953,443	15,753,354	191,923,000	20,164,000	26,988,368	-7,543,000	9,140,000	10,305,368
Vermont Telephone Co., Inc.	Vermont Telephone Co., Inc.	22,841,818	6,206,035	3,908,782	12,092,820	634,181	17,133,263	1,819,001	3,889,554	856,015	2,114,560	2,631,009
Waitsfield/Fayston Telephone Co.	Waitsfield & Champlain Valley Telecom	21,497,072	7,352,207	2,262,750	11,526,244	355,871	16,060,151	631,798	4,805,123	-129,338	1,410,059	3,265,726
		301,875,147	158,049,461	21,287,690	105,539,761	16,998,234	238,748,509	24,478,991	38,647,647	-6,380,006	12,901,656	19,365,985

Source; Annual Reports

Cable Television

Adelphia Communications

Eight subsidiaries of Adelphia Communications hold cable television franchises issued by the Public Service Board, which is the designated cable television franchising authority in Vermont. Adelphia's network passes roughly 190,000 Vermont households and provides cable service to about 113,000.

Since July 2000, several franchise performance issues concerning Adelphia have been resolved through settlement or litigation, with Adelphia's obligation to extend its network to un-served areas being the central issue. Adelphia's line extension obligation was established by the Board in April 2000 in Docket 6101/6223, where the Board renewed the eleven year franchises held by two of Adelphia's several subsidiaries.

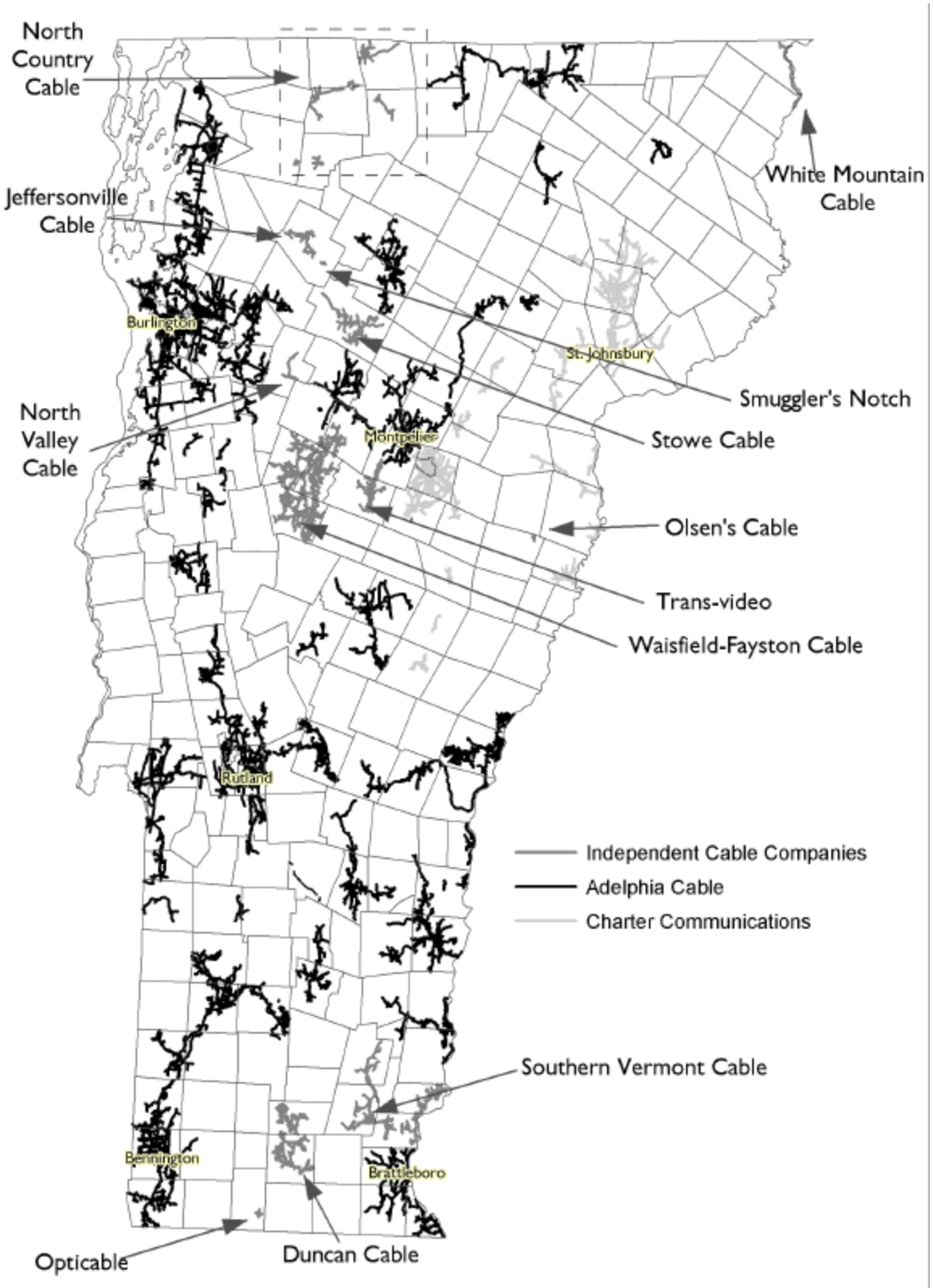
PSB Docket No. 6445 involved a dispute between the Department and Adelphia Communications over Adelphia's methods for identifying un-served areas of Adelphia's service territory to which Adelphia should be required to extend cable service. On August 2, 2001, the Board found that Adelphia had failed to conform to the line extension criteria established in the April 2000 franchise renewal, and accepted an agreement between the Department and Adelphia under which Adelphia committed to build 1,622 miles of new line extensions (compared to roughly 3,000 miles existing at the time) that would pass as many as 22,000 more residences. Adelphia also agreed to pay a $25,000 fine for delays in creating line extension plans required by a previous Board order, and to contribute $75,000 to the development of a statewide Public, Educational and Government ("PEG") Access Channel.

In November 2002, Adelphia petitioned the Board under a provision of federal law, requesting the Board to modify the line extension requirements of its franchise, including those settled in the Docket 6445, on the grounds the construction of the extensions would be "commercially impracticable". The Board, in Docket 6778, declined to release Adelphia from the previously committed 1,622 miles of line extensions, but slightly relaxed the requirements prospectively.

In 2003, with Adelphia behind schedule and unable to meeting the completion deadlines for these line extensions, the Department and Adelphia jointly proposed to the Board a revised timeline for construction of the required line extensions. Under the joint proposal, Adelphia would post a performance bound roughly equal the cost of constructing the remaining line extensions, and also pledged to construct an additional 300 miles of line extensions as compensation for the delays.

As of the end of 2004, Adelphia is ahead of schedule in constructing the required extensions.

Figure 3-2 Vermont Areas Served by Cable Systems – 2004



Smaller Cable Franchises

Roughly a dozen companies other than Adelphia hold cable television franchises in Vermont. While a few, older companies hold franchises with no fixed expiration dates, most franchise expire each eleven years. The Department reviews the qualifications and operations of these companies and typically negotiates terms upon which the Board will renew these franchises.

Charter has the second largest (next to Adelphia) number of cable television customers in Vermont, serving approximately 12,000 households in an area that reaches from Lyndonville to Barre to Royalton. Of the several franchises it holds, most were renewed in the Spring of 2003.

Other franchises renewed during the last two biennia included those of: White Mountain Cable (which serves the Town of Canaan), and North Country Cablevision. Several service area expansions, system sales and enforcement proceedings were resolved or initiated during the two biennia. Those included a petition by White Mountain Cable to sell its system to Pine Tree Cable; a petition by the Department requesting Gateway Cable (which serves the Town of Dover) to "show cause" why its franchise should not be revoked; by Duncan Cable to extend service into the Town of Dover; by Southern Vermont Cable West Dover to purchase the assets of Gateway Cable; by Duncan Cable to purchase Gateway, and by North Country Cablevision seeking authority to serve additional communities in north-western and north-central Vermont.

PSB Rules for Cable Television:

Board Rule 8.400 defines the rights and responsibilities of both cable operators and public access entities with respect to production and broadcast of public access television content over cable systems. Over the past three years, the Department and Board have collaborated with cable operators and public access television entities to up-date Rule 8.400 to clarify the public access framework and to reflect evolving technologic capabilities of cable systems. The Board filed a proposed revision of Rule 8.400 in December 2004.

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Table 3-6

Vermont Cable TV Companies, Year End 2003

Company	Subscribers	-- Stations -- Carried	Bandwidth Mhz	Basic Rate Monthly
Adelphia				
Better TV of Bennington	7,411	64	750	$11.75
First Carolina				
Grafton/Saxton River	317	319	750	$13.00
Manchester	5,499	64	750	$13.00
Weston	811	65	750	$15.00
FrontierVision				
Hardwick	2,143	61	750	$14.80
Hartford	4,189	322	450	$14.80
St. Albans	4,725	73	750	$14.80
Harron Communications				
Wells	305	70	750	$13.55
Lake Champlain				
Milton	7,229	73	750	$12.00
Mountain Cable Co.				
Montpelier	7,896	61	750/550	$14.80
Newport	4,177	59	550	$13.25
Rutland	15,519	70	750	$13.55
Williston	37,275	73	750	$14.80
Multi-Channel				
Brattleboro	4,315	319	750	$16.95
Bellows Falls	1,227	319	750	$16.95
Guilford/Ascutney	237	319	750	$16.95
Westminister	298	319	750	$16.95
Vernon	442			
Richmond Cable TV				
Richmond	2,151	73	750	$14.80
Youngs Cable TV Corp.				
Ascutney	8,483	65	750	$15.00
Adelphia Total	114,649			

Table 3-6 Vermont Cable TV Companies, Year End 2003, contd.

Company	Subscribers	-- Stations -- Carried	Capacity	Monthly Basic Rate
*Duncan Cable TV	2,412	70	120	$34.91
Helicon Cablevision				
Danville	12,624	870	870 Mhz	$17.38
Jeffersonville Cable TV	303	27	35	$22.00
North Country Cablevision	1,112	194	550 Mhz	$25.00
North Valley Cable Systems				
Bolton	119	25	30	$12.60
Limehurst	19	5	13	$7.35
North Valley Total	138			
Olsen's TV & Radio Repair	40	4	4	$13.00
Opticable, Inc	90	31	45	$22.50
Smugglers Notch CATV	547	19	19	$11.11
Southern Vermont Cable				
Newfane	419	72	110	$16.95
Putney	755	72	110	$16.95
Townshend	235	72	110	$16.95
Southern Vermont Total	1,409			
Stowe Cablevision	939	40	116	$26.63
Trans-Video, Inc	1,562	48	78	$16.40
Waitsfield-Fayston Cable	3,677	48	61	$12.25
White Mountain	250	35	36	$25.00
Total Cable Connections	**139,752**			

Note: Adelphia's system capacity is stated in Mhz
Source: Annual Reports
Duncan Cable TV bought Gateway Cablevision in 2003

Figure 3-3 Estimated DSL Availability May 2004

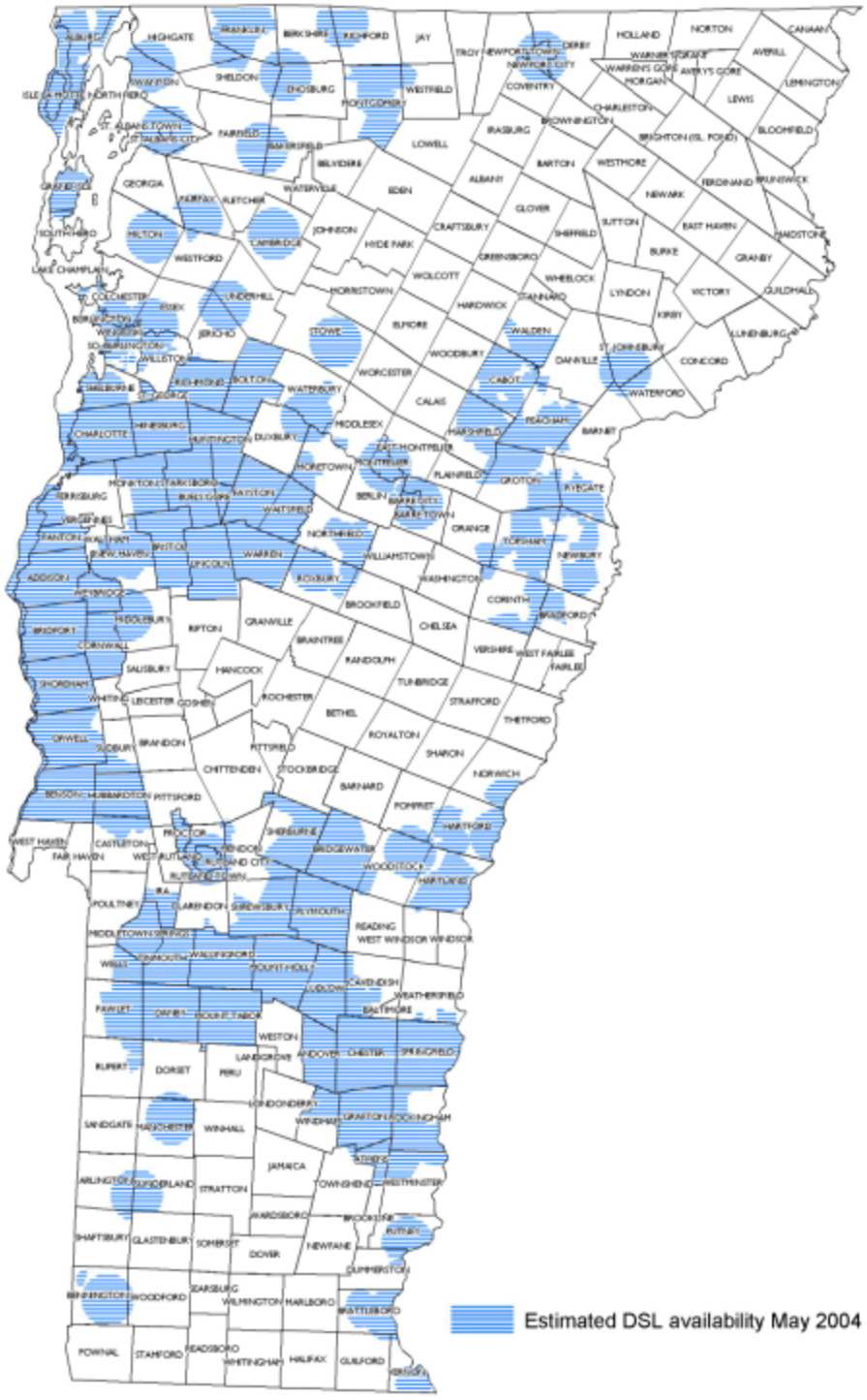


Figure 3-4 Estimated Cable Modem Availability May 2004

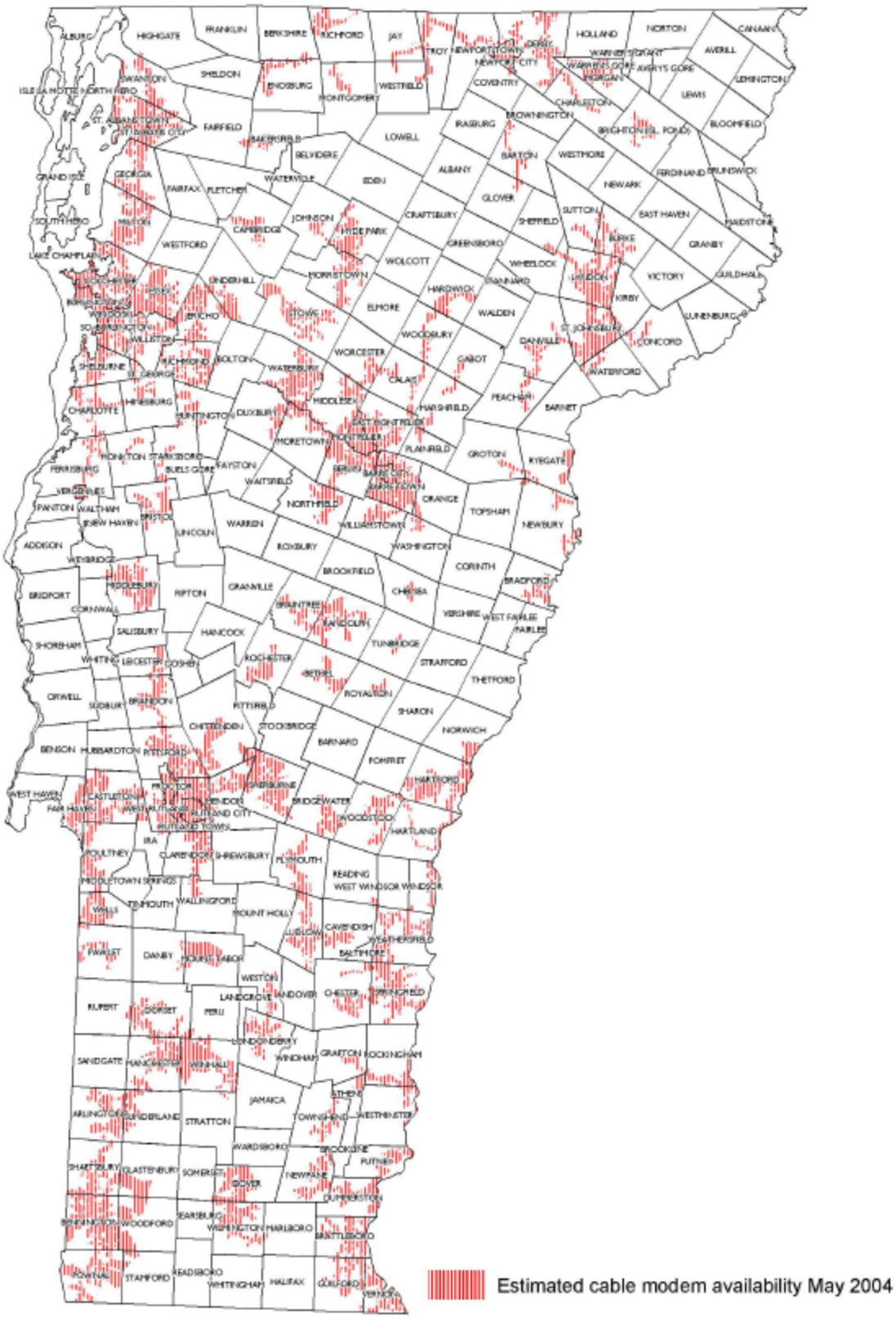


Figure 3-5 Estimated WISP Coverage May 2004

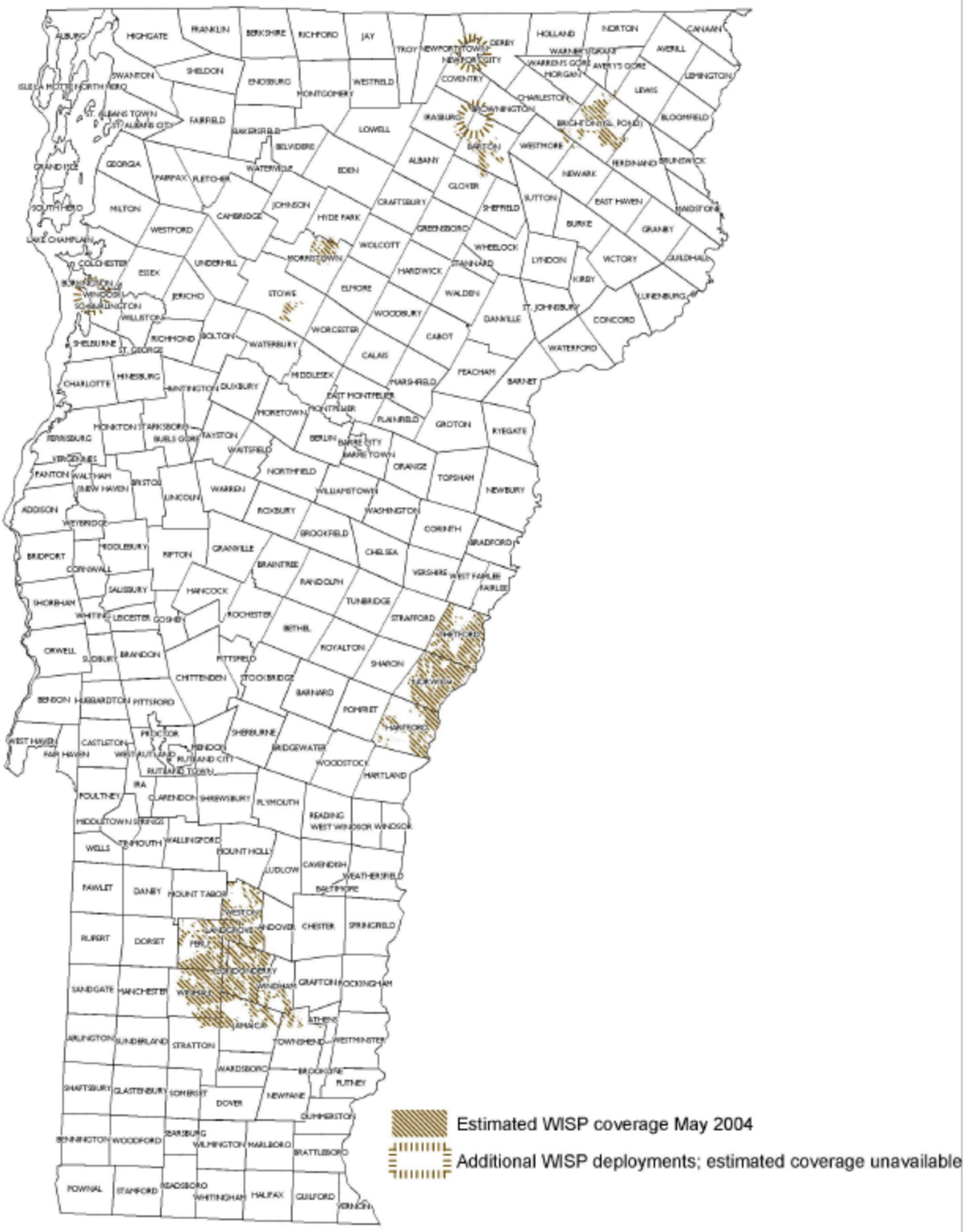
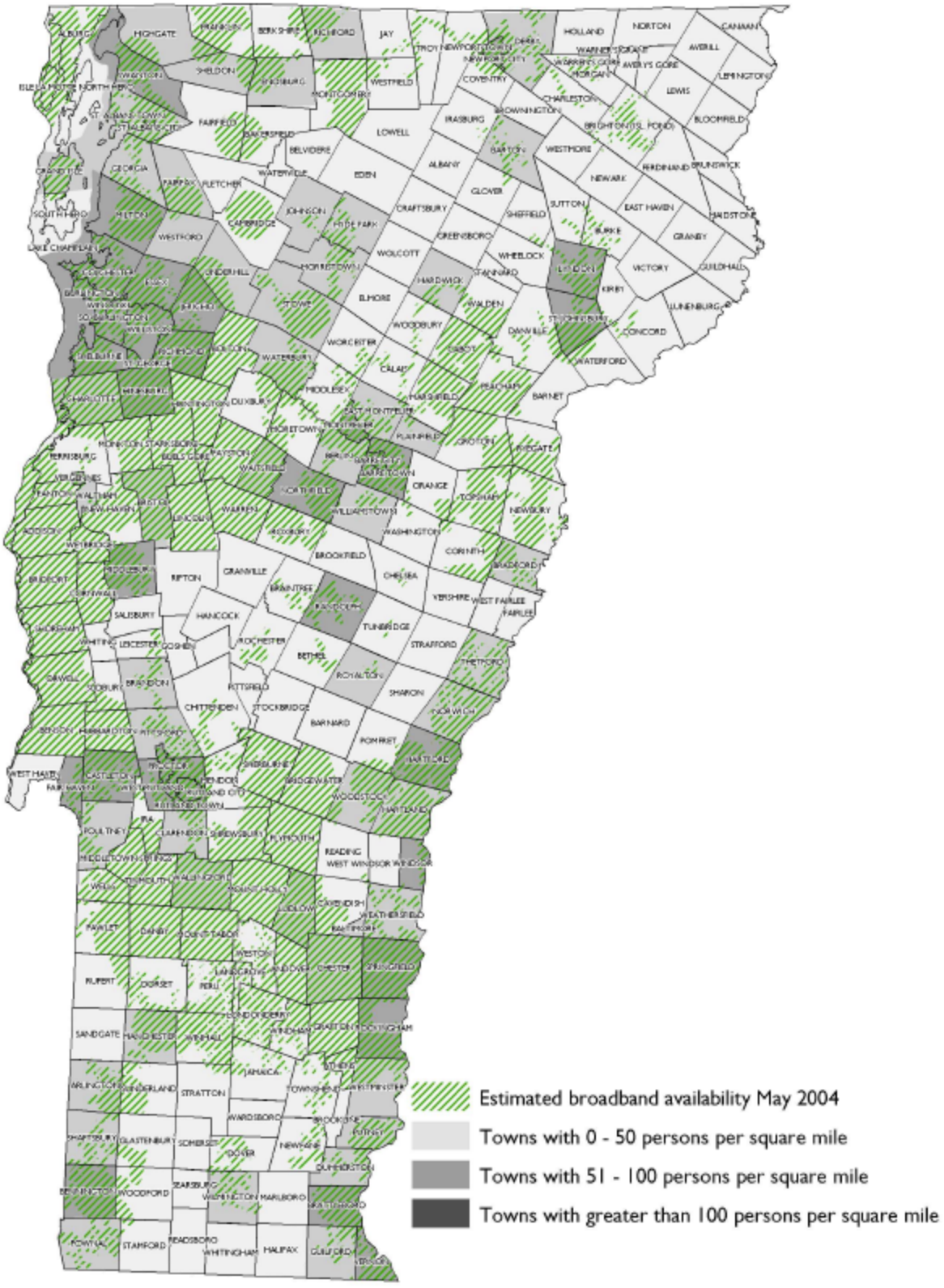


Figure 3-6 Estimated Broadband Availability May 2004



4. NATURAL GAS SYSTEMS

A. Vermont Gas Systems

Vermont continues to have a single natural gas distribution company, Vermont Gas Systems, Inc. (VGS) located in Chittenden and Franklin Counties. VGS's transmission line connects to the TransCanada Pipeline at Highgate Springs, and the Company presently serves customers in Chittenden and Franklin Counties. VGS serves approximately 35,000 customers and continues increase its customer base and gas sales by about 3% to 4 % per year

Table 4-1

Vermont Gas Systems: Customers Served 1999-2003

			--- Industrial ---		
	Residential	Commercial	Firm	Interruptible	Total
1999	27,265	4,143	0	38	31,446
2000	28,267	4,277	0	38	32,582
2001	29,275	4,398	0	36	33,709
2002	29,941	4,488	0	38	34,467
2003	30,595	4,577	0	41	35,213

Source: Vermont Gas Systems Annual Report

VGS provides firm or non-interruptible gas service to the vast majority of its customers. Approximately 35% of VGS's gas is delivered to approximately three-dozen customers who take interruptible gas service under special contracts.

Rate and Regulatory Change

On February 18, 2000, the Vermont Gas filed with the Vermont Public Service Board (the "Board") tariffs requesting a 7.6% increase in firm rates. The rate increase was approved in an Order dated September 21, 2000 and was effective for gas consumed on and after November 1, 2000. The increase was anticipated to generate an additional $2.8 million in annual revenues.

On July 13, 2000, the Company filed with the Board a request to raise firm rates by an additional 15.6%. In an Order dated October 11, 2000, the Board approved the 15.6% rate increase, on a temporary basis, effective with gas consumed on and after November 1, 2000. In an Order dated March 28, 2001 the Board granted VGS a permanent rate increase of 15.4% effective with service rendered on and after April 1, 2001. The increase was anticipated to generate an additional $6.1 million in annual revenues. The Board Ordered that $54,873 of additional revenue generated by the 0.2% difference between the 15.6% temporary increase final permanent increase of 15.4% that was billed between November 1, 2000 and April 1, 2001 be applied to reduce demand-side management deferrals.

On September 22, 2000 the Company filed with the Board a third request to raise firm rates by an additional 11.2% to be effective November 1, 2000 and requested, as an alternative to the increase, an Accounting Order which would allow the Company to defer certain increases in gas costs incurred after November 1, 2000 with future recovery of those costs. In an Order dated October 30, 2000, the Board approved the Accounting Order.

Accordingly VGS deferred for later recovery $3.4 million of gas costs (excluding carrying costs) incurred in Fiscal 2001 and suspended but did not withdraw its request for an 11.2% increase. On June 6, 2001 the Board approved an overall firm rate increase of 11.3% effective with service rendered August 1, 2001. Also effective August 1, 2001 the Board ordered VGS to cease deferring gas costs pursuant to the October 30, 2000 Accounting Order. The 11.3% increase is anticipated to generate an additional $5.2 million in revenue. The combined effect of the three filings - 7.6%, 15.4%, and 11.3% - is an overall firm rate increase of 38.2 rate increase.

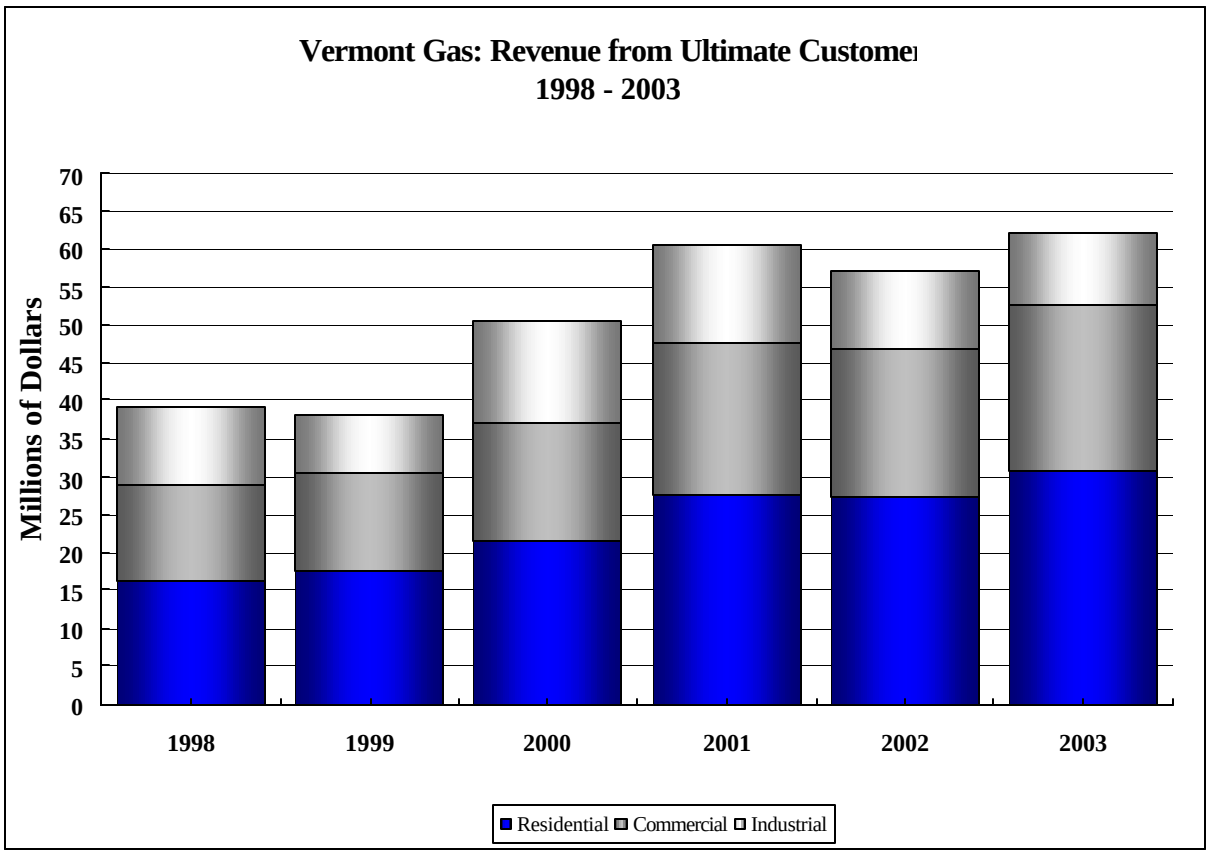
On March 5th 2001 VGS request an increase its firm retail rate by 14.8 percent, to take effect April 19, 2001, and to be implemented on a service-rendered basis on October 1, 2001.[10] The proposed rate change represents an increase in VGS's revenue requirement of approximately $8.2 million annually. VGS has also requested that the Board approve VGS's proposed "Rate Stabilization Plan" which includes provisions for (a) Gas Costs Risk Management, (b) a "Rate Stabilization Account," and (c) Regulatory Reporting. The Board declined to approve the rate increase requested by VGS, and, instead, require a rate decrease of 3.4 percent. This decrease represents a $1.891 million decrease in VGS's revenue requirement for firm gas, and sets VGS's adjusted test year cost of service at $62.933 million. The Board also decided to not approve VGS's Rate Stabilization Plan. The Board also decline VGS's request for approval of a Rate Stabilization Account

On February 22, 2002, VGS file a petition for approval (PSB Docket No. 6666) of construction of a 4.26 mile, natural gas, transmission-pressure pipeline and pressure-regulation station in Swanton and St. Albans, commencing in Swanton and terminating in St. Albans ("Phase IV Looping"), and construct a pressure-regulation station in St. Albans (the "Nason Road Station")

On September 25, 2002, VGS filed revisions to its tariffs to reflect a 5.7% reduction in firm rates (Tariff filing #5261). On September 30, 2002, the Department filed its letter of recommendation with the PSB, in which the Department recommended that the tariff revision be allowed to go into effect without suspension or hearing. The Board accepted the Department's recommendation and approved the rate reduction to take effect on a service-rendered basis, commencing October 3, 2002.

[10]Tariff Filing No. 4337.

Table 4-2



Revenue from Ultimate Customers, by Customer Class

	1998	1999	2000	2001	2002	2003
Residential	16,392,105	17,549,866	21,485,589	27,607,899	27,417,774	30,738,579
Commercial	12,415,756	12,948,875	15,644,252	19,932,168	19,452,509	21,762,596
Industrial	10,212,094	7,731,001	13,328,541	12,822,162	10,181,607	9,683,742
Total	39,019,955	38,229,742	50,458,382	60,362,229	57,051,890	62,184,917

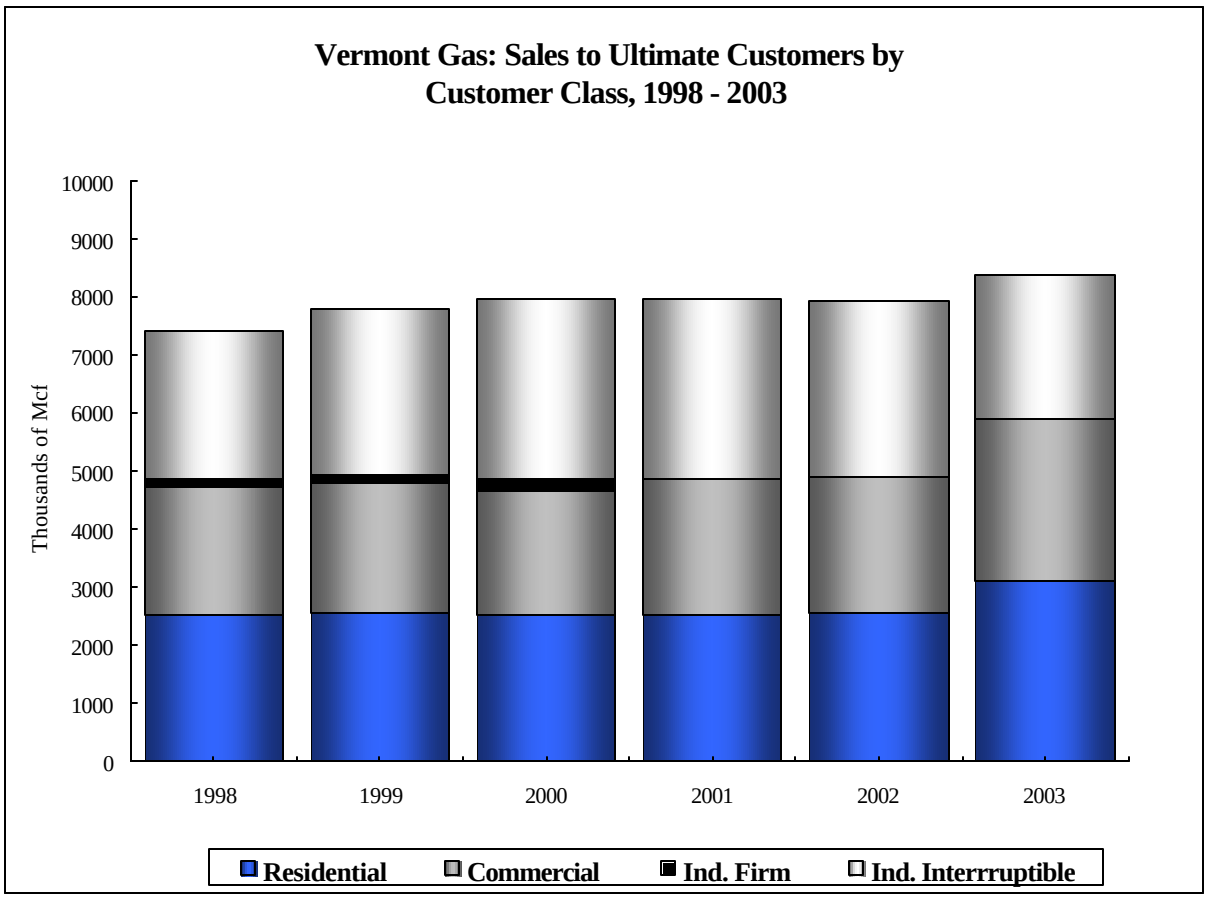
Percentage of Revenue from Ultimate Customers

	1998	1999	2000	2001	2002	2003
Residential	42.01%	45.91%	42.58%	45.74%	48.06%	49.43%
Commercial	31.82%	33.87%	31.00%	33.02%	34.10%	35.00%
Industrial	26.17%	20.22%	26.41%	21.24%	17.85%	15.57%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Yr. End 9/30/2003
Source: Annual Report

NOTE: VGS redesigned its rate classes in late 1998, Beginning in 1999 Firm Industrial Customers are included in the Commercial Category. Further, VGS began offering interruptible transportation services in late 1998. Mcf volumes and revenues from interruptible transportation service are included in the interruptible industial category.

Table 4-3



Sales to Ultimate Customers by Customer Class (Mcf)

	1998	1999	2000	2001	2002	2003
Residential	2,529,423	2,563,071	2,529,035	2,524,514	2,568,243	3,126,201
Commercial	2,206,449	2,225,279	2,144,707	2,353,228	2,324,306	2,772,155
Ind. Firm	131,270	142,373	204,207	0	0	0
Ind. Interrruptible	2,550,845	2,860,129	3,082,245	3,087,214	3,037,420	2,489,273
Total	7,417,987	7,790,852	7,960,194	7,964,956	7,929,969	8,387,629

Percentage of Sales to Ultimate Customers by Customer Class

	1998	1999	2000	2001	2002	2003
Residential	34.10%	32.90%	31.77%	31.70%	32.39%	37.27%
Commercial	29.74%	28.56%	26.94%	29.54%	29.31%	33.05%
Ind. Firm	1.77%	1.83%	2.57%	0.00%	0.00%	0.00%
Ind. Interrruptible	34.39%	36.71%	38.72%	38.76%	38.30%	29.68%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Yr. End 9/30/2001
Source: Annual Report

NOTE: VGS redesigned its rate classes in late 1998. Beginning in 1999 Firm Industrial Customers are included in the Commercial Category. Further, VGS began offering interruptible transportation services in late 1998. Mcf volumes and revenues from interruptible transportation service are included in the interruptible industial category.

On March 7, 2003, VGS filed with the Board a request for change in rates to support a total cost of service ("COS") of $64,385,000. Negotiations between the Parties have resulted in an Amended MOU that proposes a rate change of 9.6 percent that took effect on October 1, 2003, subject to the conditions contained in the Amended MOU. These conditions include VGS' agreement not to file any additional change or adjustment to rates, except as provided by the Amended MOU, until October 15, 2005, and VGS' agreement to increase its investment in its system in the years 2004 and 2005. During the term of the Amended MOU, VGS' cost to supply natural gas to its firm customers will be determined by formulas contained in VGS' gas-supply contracts and adjusted to reflect contracts by which VGS has hedged or will hedge the wholesale price it pays for gas. VGS will also incur certain costs to store gas for subsequent redelivery during the winter months and to transport gas to get the gas to VGS' system on the U.S. Canada border. The Amended MOU allows VGS to pass through increases or decreases in its firm commodity costs, storage costs and delivery costs when they become known and measurable. The Amended MOU also provides for VGS to defer and then amortize delivery costs incurred before October 1, 2005, and certain firm commodity costs incurred as of October 1, 2003, which will result in decreases or increases in such costs being charged to firm customers at the same time in 2004 and 2005.

On April 18, 2003, VGS filed a request for a CPG seeking authorization to construct a "natural-gas facility" to be located in the Town of Milton. Specifically, VGS plans to construct a small, pressure regulation station and approximately 30 feet of two-inch transmission-pressure pipeline that will connect to an existing VGS natural gas transmission-pressure pipeline for the purpose of serving an eight-unit housing development in Milton, Vermont. The PSB approved this petition.

July 29, 2003: PSB Docket No. 6876, CPG authorizing the rebuilding of an existing pressure-regulation station in St. Albans, Vermont

February 17, 2004; PSB Docket No. 6939, Investigation into Successor Service Quality & Reliability Performance, Monitoring & Reporting Plan

VGS filed a petition on March 25, 2004, requesting a certificate of public good authorizing construction of a "natural-gas facility" to be located in the Town of St. Albans, Vermont. VGS' petition specifically seeks to (1) construct a 2.85-mile natural gas pipeline in St. Albans, Vermont, ("Phase V Looping") and (2) relocate an existing pressure-regulation station from Swanton, Vermont, to t St. Albans, Vermont. The PSB approved this petition with conditions.

Gas Supply

The Company has a gas purchase contract extending through October 31, 2006 with TransCanada Energy ("TCE") formerly TransCanada Gas Services, Limited ("TCGS"). The contract includes a demand charge component in addition to a commodity charge. The demand charge is expensed ratably over the contract year based on expected system throughput. The contract contains a minimum annual purchase requirement of 1.8 Billion cubic feet (Bcf) of firm gas. The firm commodity price is indexed to the New York Mercantile Exchange ("NYMEX"). The non-firm commodity price is indexed to the price of alternate fuels, including fuel oil and natural gas, generally used by VGS's non-firm customers. Total amounts purchased under the contracts were approximately $17.7 million and $7.4 million for the years ended September 30, 2001 and 2000, respectively.

In April 1997, VGS executed a contract for natural gas with Husky Oil Operations Limited ("Husky"), formerly Renaissance Energy Limited, which went into effect November 1, 1998 and runs through November 1, 2008. The contract quantity is 2.9 Bcf annually. The commodity price is indexed to the Alberta Border

(Empress) Month Average Spot price. The contract requires all 2.9 Bcf be purchased annually. Total amounts purchased under the contracts were approximately $17.1 million and $6.9 million for the years ended September 30, 2001 and 2000, respectively.

In August 2000, VGS entered into a short-term supply contract with Husky effective November 1, 2000 through October 31, 2002. The contract requires 1,000 Gj/d be purchased and is indexed to AECO-C & NIT One-month spot price.

In August 2001, VGS entered into a short-term supply contract with Mirant Americas Energy Marketing Canada, Ltd. ("Mirant"). The contract runs from November 1, 2001 through March 31, 2002 and requires the purchase of 480 Mmbtu per day at $3.80/Mmbtu.

In June 2002, the Company entered into two short-term supply contracts with Husky, the first is effective November 1, 2003 through October 31, 2004. The contract requires 2,000 Gigajoules/day (Gj/d) be purchased and is indexed to NYMEX. The second is for firm peaking supply of up to 3000 Gj/day for the period November 1, 2003 through March 31, 2004. The service is limited to 30 days during the contract period and is indexed to the Iroquois daily pricing.

In July 2002, the Company entered into two supply contracts with Coral Energy. The first contract is for firm baseload supply of 1,000 Gj/day from November 2002 through November 2003 and is indexed to NYMEX. The second is for firm peaking supply for up to 3,000 Gj/day for the period November 2002 through April 2003 and is limited to thirty days during the contract period.

In August 2002, the Company entered into a firm peaking contract with Mirant for the December to March periods of 2002/03, 2003/04, and 2004105. This contract was not part of the sale to Cargill. The contract is for 6,635 decatherm (dth)/day and service is limited to 30 days during each year with no minimum usage requirements. The commodity price is indexed to Transco Zone 6 New York Daily Midpoint. The contract includes a first-year demand charge of $129,380 increasing to $134,360 in year two and $135,605 in the final year. In 2003, Mirant filed for bankruptcy protection. By letter dated October 20, 2003, Mirant informed VGS of its intention to continue to perform under the peaking agreement.

Transportation and Storage Contracts

VGS has a gas storage and transportation services contract with Gaz Metropolitain and Company, Limited Partnership a related party, extending through April 1, 2010. The contract includes a demand charge component, a storage fee, and per unit injection and withdrawal charges. The demand charge and storage fees are expensed ratably over the fiscal year. Injection fees are capitalized as a part of inventory and expensed as gas is withdrawn from storage. Withdrawal fees are expensed as incurred.

In April 1998, VGS entered into a transportation-services contract with TransCanada Transmission (formerly TransCanada Pipelines Limited) effective November 1, 1998 through October 31, 2008. The contract provides for 8,538 Gj per day of pipeline capacity used for transporting the Husky supply.

In February 2000, VGS entered into two additional transportation services contracts with TransCanada Transmission. The first is effective November 1, 2000 through October 31, 2001 and provides for 1,000 Gj of pipeline capacity used for transporting the incremental Husky supply. The second contract is effective

November 1, 2000, through October 31, 2002 and provides for 500 Gj of storage transportation service to be used to transport the Mirant volumes during fiscal 2002.

VGS also has two peaking supply contracts through March 31, 2002. The first contract is with TCE for 7,000 Mmbtu, and includes a monthly demand payment of $24,881.25 from November 2001 to March 2002. The service is limited to 30 days during the contract period with no minimum usage requirements. The commodity

price is indexed to Transco Zone 6 New York Daily Midpoint. The second contract is with Coral Energy for 3,000 Gj and runs from December 1, 2001 through April 1, 2002. This service is also limited to 30 days during the contract period with no minimum usage requirements. This contract has no demand charge component and the commodity price is indexed to Transco Zone 6 New York Index.

Distribution System Improvements

Vermont Gas has begun the construction of 4.26 miles of 16-inch pipeline located in Swanton and St. Albans, Vermont, commencing in Swanton and terminating i in St. Albans; and construction of a pressure-regulation station in St. Albans.

This project is the fourth phase of a multi-year process of reinforcing or "looping" VGS' transmission-pressure network. Phases one through three of the system expansion resulted in a looping of the system from the U.S./Canada border to Beebe Road in Swanton, approximately 9.1 miles.

Phase IV Looping begins at the current southern terminus of the built-out portions of the System Expansion and follows the New England Central Railroad and the existing 10-inch-diameter pipeline, traveling within existing and new rights-of-way on private property except for one New England Central Railroad crossing, four road crossings in the Town of Swanton, one road crossing in the Town of St. Albans and a Vermont state highway crossing.

The proposed Nason Road Station will provide needed reinforcement to the St. Albans distribution system and is strategically located as a convenient southern terminus for future System Expansion projects.

Energy Efficiency

VGS offers six demand - side management programs for residential and commercial customers. The progr ams offer financial and technical assistance to customers to help ensure the efficient use of natural gas. As Vermont 's only regulated gas utility, Vermont Gas Systems also is required by Vermont law to provide least cost service and to provide cost effective efficiency services to its customers. Through 2003, Vermont Gas reports spending $ 10.6 million for DSM services that saved customers a cumulative estimated 433,312 Mcf, which represents an annualized savings of approx 3.8 % of its load.

Table 4-4

Vermont Gas Company - Energy Extenders Program Summary

	2000	2001	2002	2003
Utility Cost	$812,692	$1,053,016	$954,167	$1,136,766
Annualized Mcf Savings	43,555	43,186	51,834	51,344
Peak Day Mcf Savings	236	356	363	395

Source: VGS 2003 Annual Report, Demand Side Management Programs, March 29, 2004

Safety Program

Vermont Gas has an in house training program for the purpose of certifying its own employees in proper gas appliance installation. The company also provides training for contractors who install gas appliances for VGS customers. In August of 1999 Federal Regulations (490 CFR 192 n) were amended to require pipeline operators to: develop and maintain a written qualification program for individuals performing covered tasks on pipeline facilities. The purpose of the regulations is to ensure a qualified work force and to reduce the probability and consequence of incidents caused by human error.

Table 4-5
Vermont Gas: Condensed Balance Sheets and Operating Statements, 2000- 2001

(dollars)

	Total Revenue	Operation Expenses	Maintenance Extenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Net Other Income & Deductions	Net Interest Charges	Extraordinary Items after Income	Net Income
2001	$62,195,072	$49,637,760	$611,241	$3,519,880	$0	$0	$1,827,227	$1,736,946	$450,796	$57,783,850	$4,411,222	$52,536	$0	$1,182,146	$0	$3,281,612
2000	$52,197,467	$39,929,767	$718,525	$3,272,938	$0	$0	$1,658,495	$1,492,289	$666,546	$47,738,560	$4,458,907	$44,585	$0	$1,265,246	$0	$3,238,246

Yr. End 9/30/2001

Source: Annual Report

Condensed Balance Sheets 2000 - 2001

(dollars)

	Total Utility Plant	Less; Depreciation & Amortization	Net Utility Plant	Other Property & Invstmt	Current & Accrued Assets	Deferred Debts	Total Assets & Other Debits	Proprietary Capital	Long - Term Debt	Current & Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
2001	83,590,383	(29,995,498)	53,594,885	622,228	13,136,149	7,964,694	75,317,956	33,423,577	10,000,000	26,768,004	5,124,600	1,775	75,317,956
2000	79,550,723	(27,047,582)	52,503,141	347,697	10,051,899	4,169,192	67,071,929	30,141,964	10,000,000	22,206,336	4,671,300	52,329	67,071,929

Table 4-5A

Vermont Gas: Condensed Balance Sheets and Operating Statements, 2002- 2003

(dollars)

	Total Utility Plant	Less; Depreciation & Amortization	Net Utility Plant	Other Property & Invstmt	Current & Accrued Assets	Deferred Debts	Total Assets & Other Debits	Proprietary Capital	Long - Term Debt	Current & Accrued Liabilities	Deferred Income Tax	Deferred Credits	Total Liabilities & Other Credits
2003	96,914,493	36,661,363	60,253,130	815,864	9,351,110	8,510,412	78,930,516	39,285,322	10,000,000	20,052,884	7,362,700	2,229,610	78,930,516
2002	90,047,176	32,973,487	57,073,689	747,461	13,574,224	9,628,894	81,024,268	38,631,797	10,000,000	23,501,202	6,433,200	2,458,069	81,024,268

Condensed Operating Statements 2002 - 2003

(dollars)

	Total Revenue	Operation Expenses	Maintenance Extenses	Depreciation Expense	Amortization Expense	Property Loss	Non Income Taxes	Federal Income Tax	Other Income Tax	Total Utility Operations Expense	Net Utility Operating Income	Total Other Income	Net Other Income & Deductions	Net Interest Charges	Extraordinary Items after Income	Net Income
2003	64,480,499	49,263,569	708,994	4,203,536	0	0	2,031,626	2,330,689	639,660	59,178,074	5,302,425	32,332	0	879,233	0	4,455,524
2002	62,057,044	48,022,004	680,986	3,858,062	0	0	1,835,078	2,272,454	366,359	57,034,943	5,022,101	23,899	0	1,087,780	0	3,958,220

Yr. End 9/30/2003

Source: Annual Report

5. REGULATED WATER AND WASTEWATER COMPANIES

The Department and the Board regulate only privately owned water companies. Many but not all of these are also regulated by the Water Supply Division of the ANR. Vermont's small private water companies continue to struggle to remain viable and to meet the Federal Safe Drinking Water Act (SDWA) of 1974, its 1986 amendments, and its reauthorization in 1996. Some of these companies lack professional or interested management, access to reasonably-priced capital, or have other problems affecting their overall viability. Many small companies have been taken over by municipalities, fire districts, or other consumer-owned entities that are better able to operate these systems in a sustainable manner. The DPS generally encourages such transfers, and works with customers to help them evaluate their options.

During the period July 1, 2000 through June 30, 2004, the Department reviewed 12 requests for transfers and/or abandonment and two rate increase requests due to costs associated with compliance with requirements established by ANR's Water Supply Division and SDWA rules. The companies either abandoned or transferred are: Foothills Water Company, Forrestbrook Water Company, Bolton Water Supply Company, Bolton Water Company (associated with the Bolton Valley ski area), Burke Mountain Water Company (transferred twice), Mountain Water Company, Country Estates Water Company, Sunshine Water Company, Allen Point Water Company, and Barnet Water System, Inc.[11] Of these, the Forrestbrook Water Company in Brandon was transferred to a fire district; the Bolton Water Supply Company, Foothills Water Company, Sunshine Water Company, and Allen Point Water Company were transferred to customers of those systems. These systems are therefore no longer regulated by the PSB. As of June 30, 2004 there were 27 water systems regulated by the Department and Public Service Board.

Companies receiving rate increases during the 2000-2002 biennium are the Arlington Water Company and the Barnet Water System, Inc.

The Arlington Water Company was the first privately-owned water company to avail itself of the State Drinking Water Revolving Fund. This fund is administered by the Water Supply Division of the ANR and by the Vermont Economic Development Authority (VEDA). Its purpose is to make reasonably-priced capital available to water systems needing improvements to comply with water supply regulations. Systems on the Water Supply Division=s Priority List can apply for 20-year loans at interest rates from 3% to minus 3%, depending on the incomes of the population served.

In 1993, 30 V.S.A. ' 203(6) established requirements that the Public Service Board regulate wastewater companies, other than those owned by a municipality, that are engaged in the collection or disposal of wastewater or domestic sewage and have 750 or more service connections. The one company that was subject to this statute, Quechee Service Company, was transferred to the Town of Hartford. The DPS has occasionally received requests from customers of other private wastewater companies, to regulate those companies. However, such regulation could be accomplished only if the statute were amended.

An emerging issue in water system regulation involves PSB regulation of water systems in mobile home parks. In some cases these parks can benefit from metering and billing for water separately from the lot rent. This may be from a desire to encourage conservation to reduce total costs, but may also be driven by an urgent need to conserve septic capacity or prevent septic system failure. In October 2002 the PSB ruled that if a mobile home park meters and bills for water it is a water company which under existing law must be regulated. This ruling may have the unintended effect of discouraging parks from metering and billing for water, despite the economic and environmental benefits of doing so.

[11] The Rolling Meadows Homeowners Association no longer has any customers. It has filed at the PSB a request for revocation of its CPG; its petition has yet to be acted upon by the Board.

One mobile home park water system, located in the Birchwood Manor Mobile Home Park and managed by the Housing Foundation Inc., applied for and received a Certificate of Public Good and approval of in itial rates. Three other such systems, all managed by the Housing Foundation Inc., have petitions for CPGs and rate approval pending; however, the petitioner has failed to pursue these cases and they are subject to dismissal.

Table 5-1

Vermont Regulated Water & Wastewater Companies:
Residential Connections and Rate Information as of June 2003

				Annual Residential Rates	
Water Companies	**Location**		**Connections**	**Flat Rate**	**Metered Rate**
Arlington Water Company	Arlington		458		$327.76+$5.42/1000g over 11,000g
Austin, Paul A.	Shelburne		3	$100.00	
Barnet Water System, Inc.	Barnet		65	$396.00	$268.00+$.1148/100g
Berlin Water Company	Berlin		34	$400.00	
Bolton Valley Water & Sewer	Bolton		202		69.41+$.147/100g
Bonnell Water System	Newport	no 1991	6	$170.00	
Bouchard Water System	Swanton	no report since 1985	10	$50.00	
Bromley Water Company, Inc.	Bromley		298		$177.93+$0.1608/100g
Burke Mountain Water Company	Burke		177	$98.00	$63.47+$2.76014/1000g
Chalet Village Water System Inc.	Stockbridge		30	$294.00	$263.20+$0.05524/100g
Colonial Estates Water Company	Rutland		45		$97 + $.225/cf
Country Estates Water Company	Ascutney		188	$229.11	$137.68+$0.1965/100g
Craig, A.Z. Water Company	Sutton	no 1991	7	$16.00	
Crystal Springs Water Company	E. Montpelier		120	$493.08	$375+$.143/100g
East Haven Sewage and Water	Essex Junction		31	$67.00	
Eastview Water Company, Inc.	E. Montpelier		1	$100.00	
J & F Water Company	Colchester Ctr.	1990 data	5		$15/1000cf+$1.05/100g over 1000g
Jay Utility Company, Inc.	Jay	no file	None		
Krohn, John F.	Milton	1990 data	3	$180.00	
L&B Water Works	Wheelock		20	$60.00	
Middle Road Utility Co., Inc.	Colchester	no file	None		
Mountain Water Company	Warren		625		$104 + Flow Design
Pines Development Water System	Morrisville	1989	9	$225.00	
Riverside Water Works, Inc.	Beecher Falls		212	$200.00	$156.00+@$0.3650/1000g
Rolling Meadows Homeowners Ass.	Newfane		26	$200.00	
Smugglers Notch Water Company	Jeffersonville		343	$112.00	
Vermont Water Utilities, Inc.	Georgia		51		$326.41+$2.95/1000g
Westminster Aqueduct Society*	Westminster	no rep	51	$90.00	
Willowghby Lake Water Works	Westmore		16	$25/summer	
Woodstock Aqueduct Company	Woodstock		540		$180/0-300cf or $0.2882/cf300+cf
Total Water Connections			3576		

*pending transfer to municipality/

Source: DPS Economics Division